US009110958B2

(12) **United States Patent**
Brust et al.

(10) **Patent No.: US 9,110,958 B2**
(45) **Date of Patent: Aug. 18, 2015**

(54) **EXPERT-BASED CONTENT AND COACHING PLATFORM**

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(72) Inventors: **Thomas Edwin Brust**, White Bear Lake, MN (US); **Phil Kennedy**, Eagan, MN (US); **Jamal Khan**, Redding, CT (US); **Jay W. Johnson**, Minnetrista, MN (US); **Tom Waddell**, New Brighton, MN (US)

(73) Assignee: **Wellclub, LLC**, Saint Paul, MN (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 160 days.

(21) Appl. No.: **13/801,048**

(22) Filed: **Mar. 13, 2013**

(65) **Prior Publication Data**

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Related U.S. Application Data

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(51) **Int. Cl.**
G06F 17/30 (2006.01)
G06F 3/0481 (2013.01)

(52) **U.S. Cl.**
CPC ***G06F 17/30554*** (2013.01); ***G06F 3/0481*** (2013.01); ***G06F 17/30386*** (2013.01); ***G06F 17/30598*** (2013.01)

(58) **Field of Classification Search**
None
See application file for complete search history.

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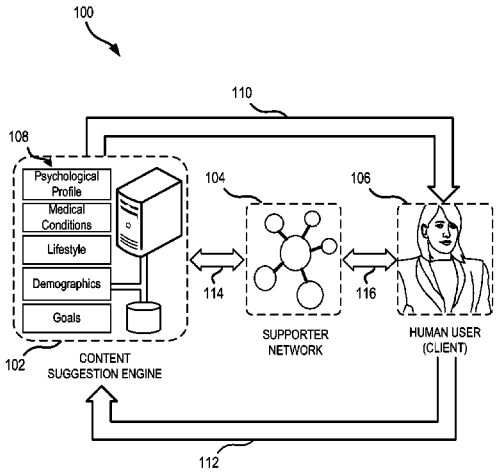
Primary Examiner — Belix M Ortiz Ditren
(74) *Attorney, Agent, or Firm* — Schwegman Lundberg & Woessner, P.A.

(57) **ABSTRACT**

Systems and methods for implementing and performing coaching-assisted content delivery and workflows are described. In one example, a goal-based workflow integrates with operations for suggesting and delivering content on behalf of professional users. The operations may be conducted in connection with a subscription or membership to an information service, and various interactions between a client user and a professional user through the information service. In further examples, the information service may track data for the human user, generate suggestions and playlists, manage the accomplishment of goals and logic triggers, and exchange communications, to facilitate the relationship between the professional user and the client user. In other further examples, the information system manages various data values used to provide prompts, reminders, motivators, and other forms of suggested content to the client user.

9 Claims, 28 Drawing Sheets



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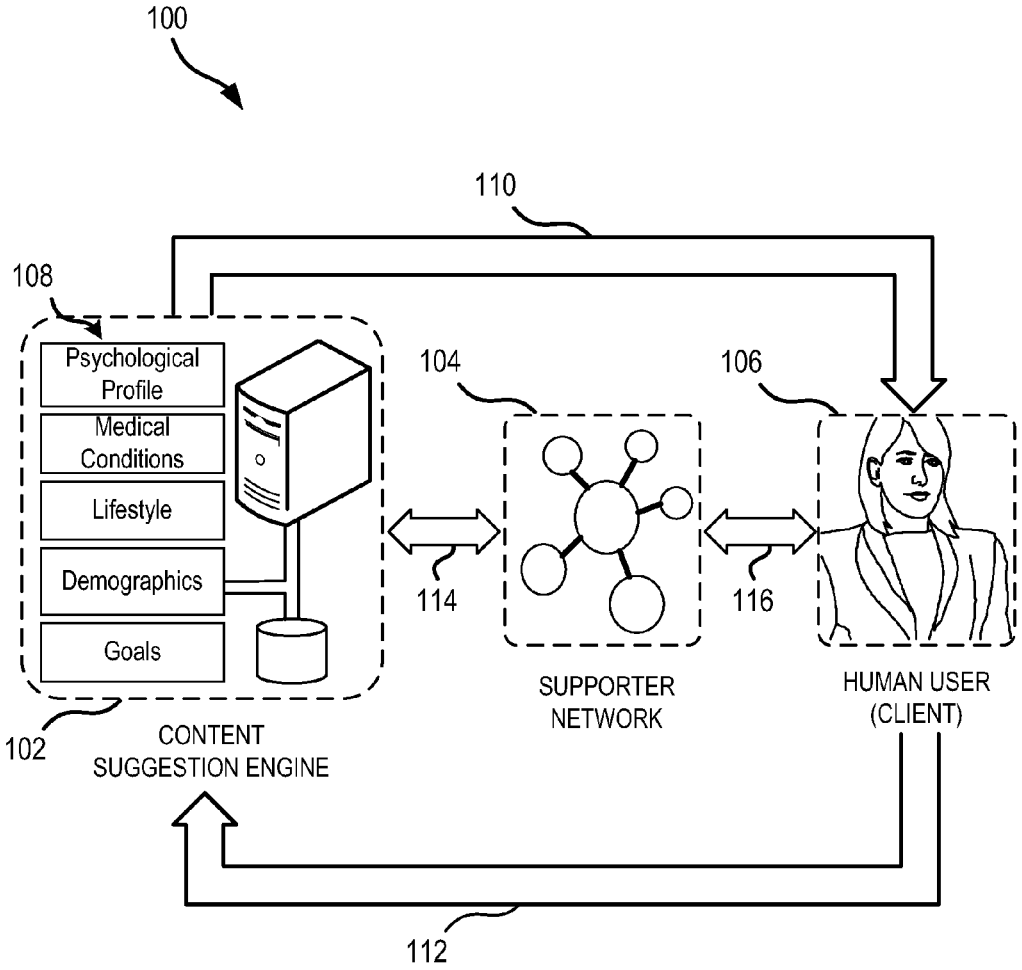

100
110
108
Psychological Profile
Medical Conditions
Lifestyle
Demographics
Goals
104
106
114
116
102
CONTENT SUGGESTION ENGINE
SUPPORTER NETWORK
HUMAN USER (CLIENT)
112

FIG. 1

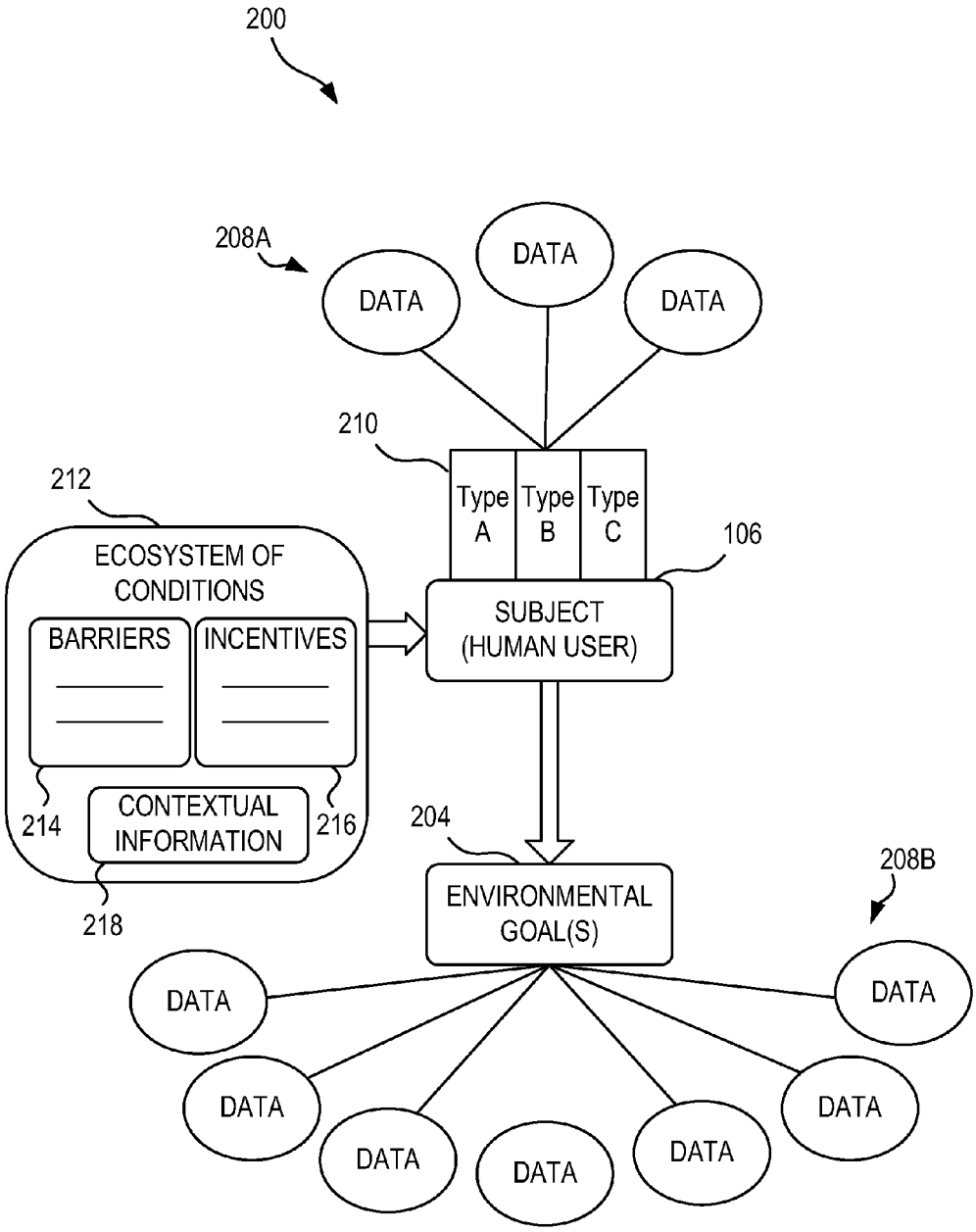

200
208A
DATA
DATA
DATA
210
Type A
Type B
Type C
106
212
ECOSYSTEM OF CONDITIONS
BARRIERS
INCENTIVES
214
CONTEXTUAL INFORMATION
216
218
SUBJECT (HUMAN USER)
204
ENVIRONMENTAL GOAL(S)
208B
DATA
DATA
DATA
DATA
DATA
DATA
DATA

FIG. 2A

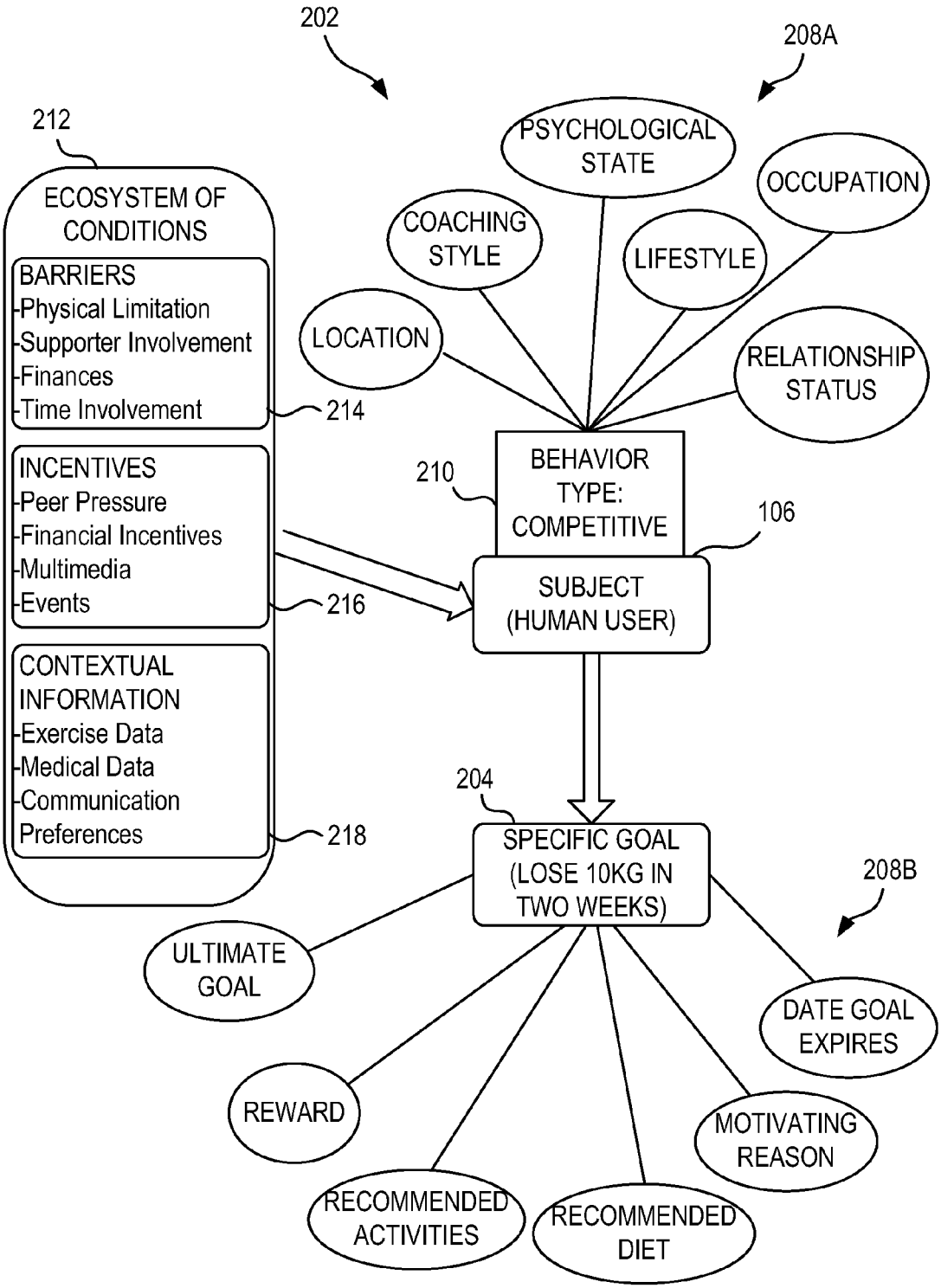

202
208A
212
ECOSYSTEM OF CONDITIONS
BARRIERS
-Physical Limitation
-Supporter Involvement
-Finances
-Time Involvement
214
INCENTIVES
-Peer Pressure
-Financial Incentives
-Multimedia
-Events
216
CONTEXTUAL INFORMATION
-Exercise Data
-Medical Data
-Communication Preferences
218
PSYCHOLOGICAL STATE
OCCUPATION
COACHING STYLE
LIFESTYLE
LOCATION
RELATIONSHIP STATUS
210
BEHAVIOR TYPE: COMPETITIVE
106
SUBJECT (HUMAN USER)
204
SPECIFIC GOAL (LOSE 10KG IN TWO WEEKS)
208B
ULTIMATE GOAL
DATE GOAL EXPIRES
REWARD
MOTIVATING REASON
RECOMMENDED ACTIVITIES
RECOMMENDED DIET

FIG. 2B

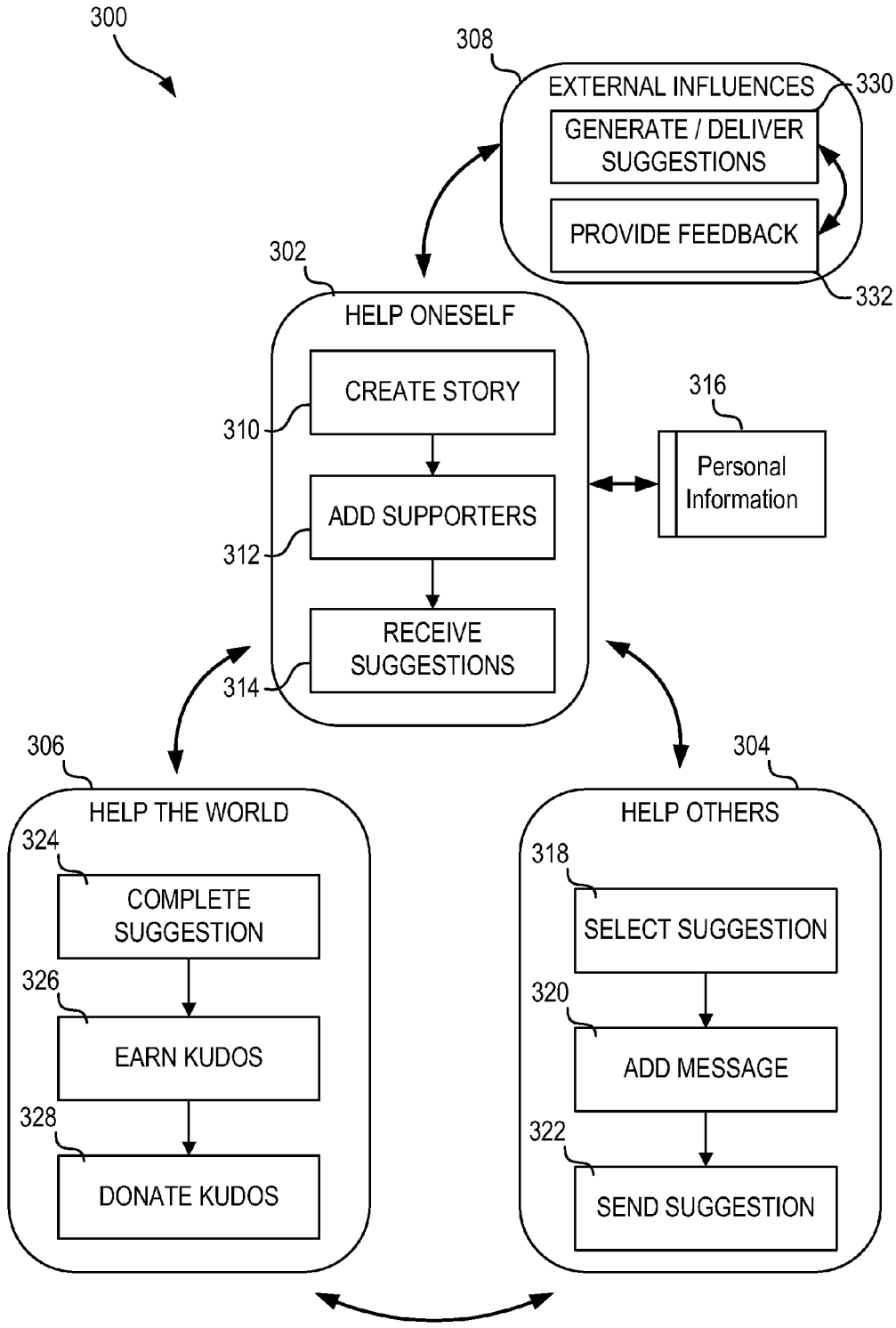

300
308
EXTERNAL INFLUENCES
330
GENERATE / DELIVER SUGGESTIONS
PROVIDE FEEDBACK
332
302
HELP ONESELF
CREATE STORY
310
ADD SUPPORTERS
312
RECEIVE SUGGESTIONS
314
316
Personal Information
306
HELP THE WORLD
324
COMPLETE SUGGESTION
326
EARN KUDOS
328
DONATE KUDOS
304
HELP OTHERS
318
SELECT SUGGESTION
320
ADD MESSAGE
322
SEND SUGGESTION

FIG. 3

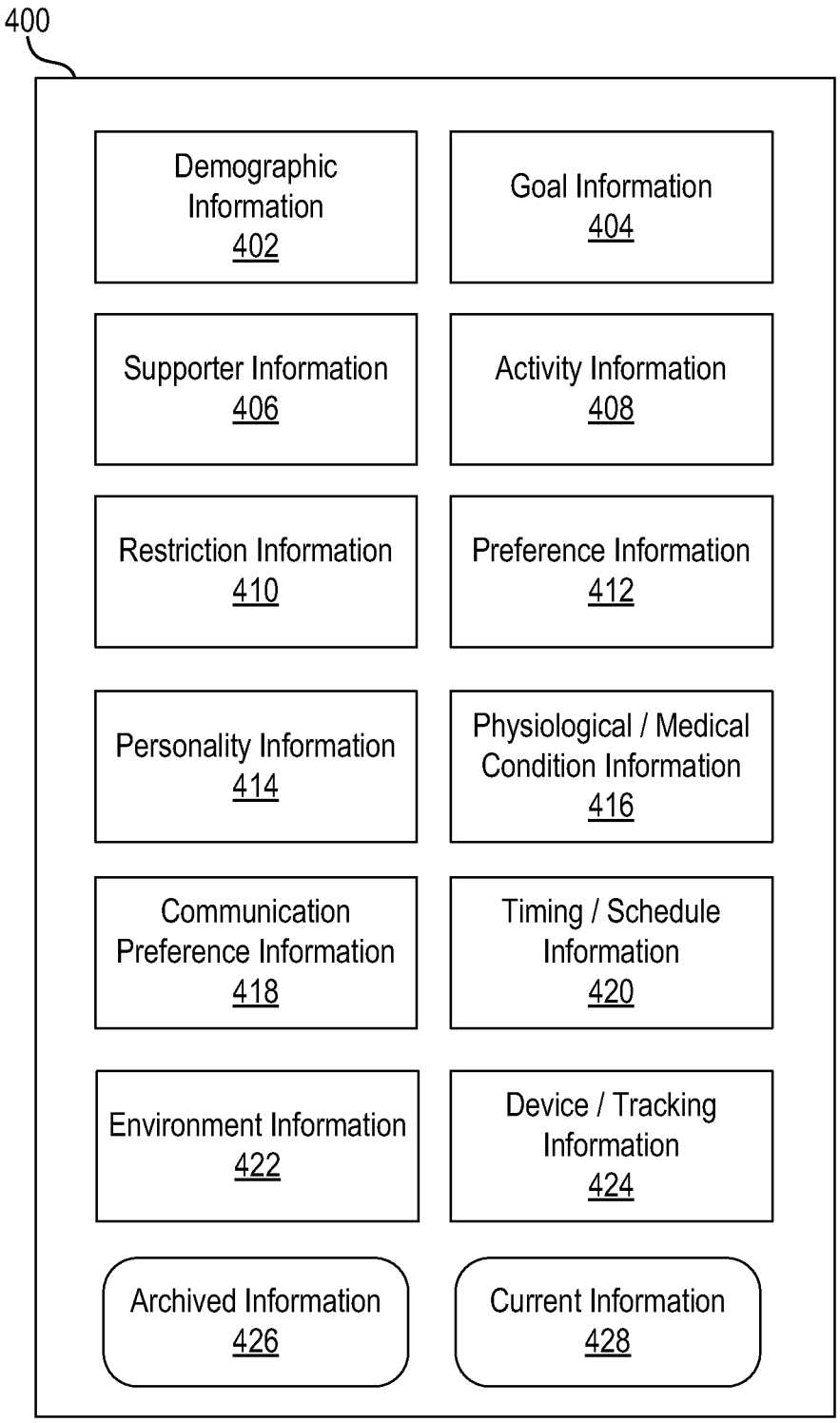

400
Demographic Information 402
Goal Information 404
Supporter Information 406
Activity Information 408
Restriction Information 410
Preference Information 412
Personality Information 414
Physiological / Medical Condition Information 416
Communication Preference Information 418
Timing / Schedule Information 420
Environment Information 422
Device / Tracking Information 424
Archived Information 426
Current Information 428

FIG. 4

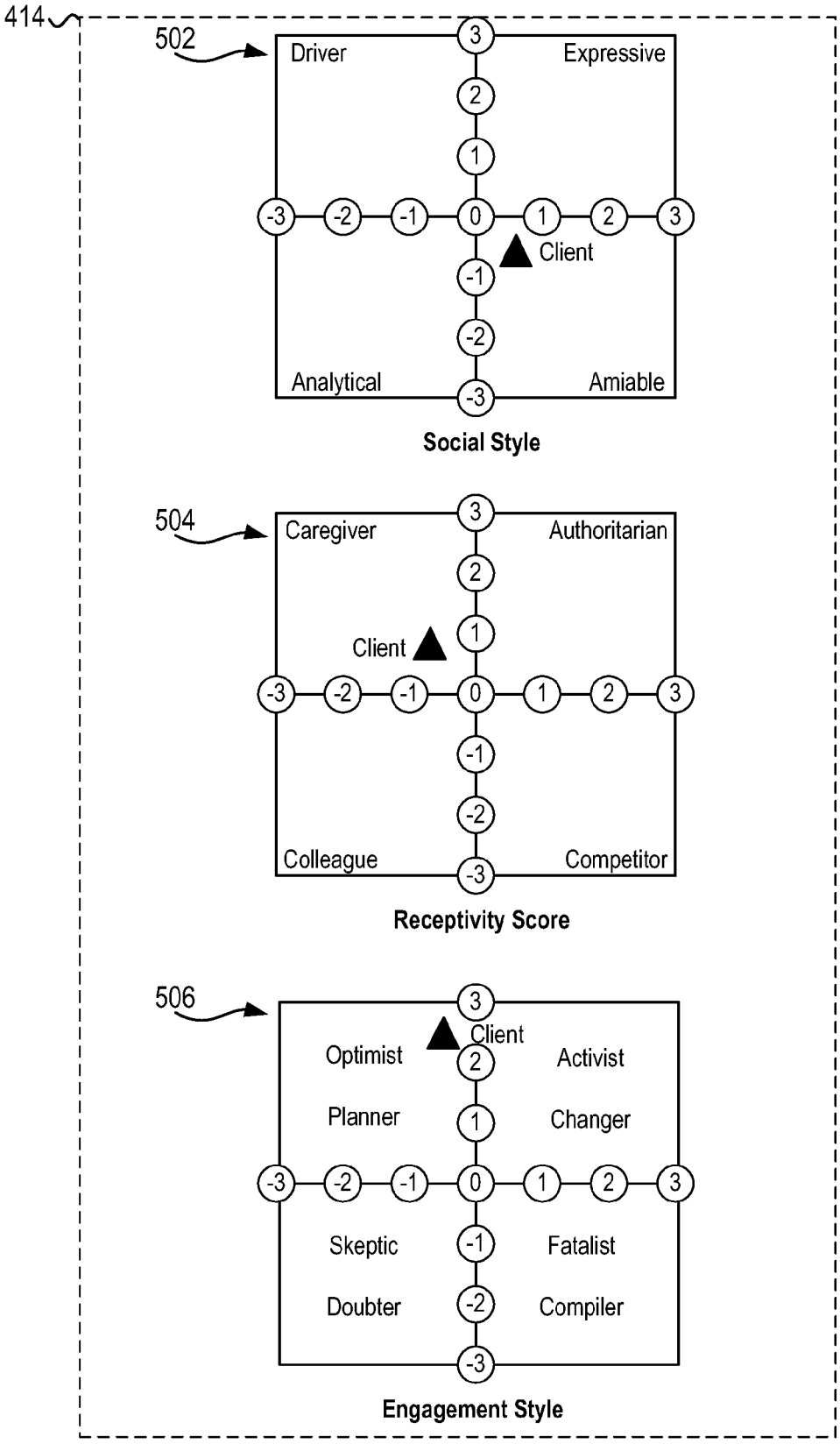

414
502
Driver
Expressive
Analytical
Amiable
Client
3
2
1
0
-1
-2
-3
Social Style
504
Caregiver
Authoritarian
Colleague
Competitor
Client
Receptivity Score
506
Optimist
Activist
Planner
Changer
Skeptic
Fatalist
Doubter
Compiler
Client
Engagement Style

FIG. 5

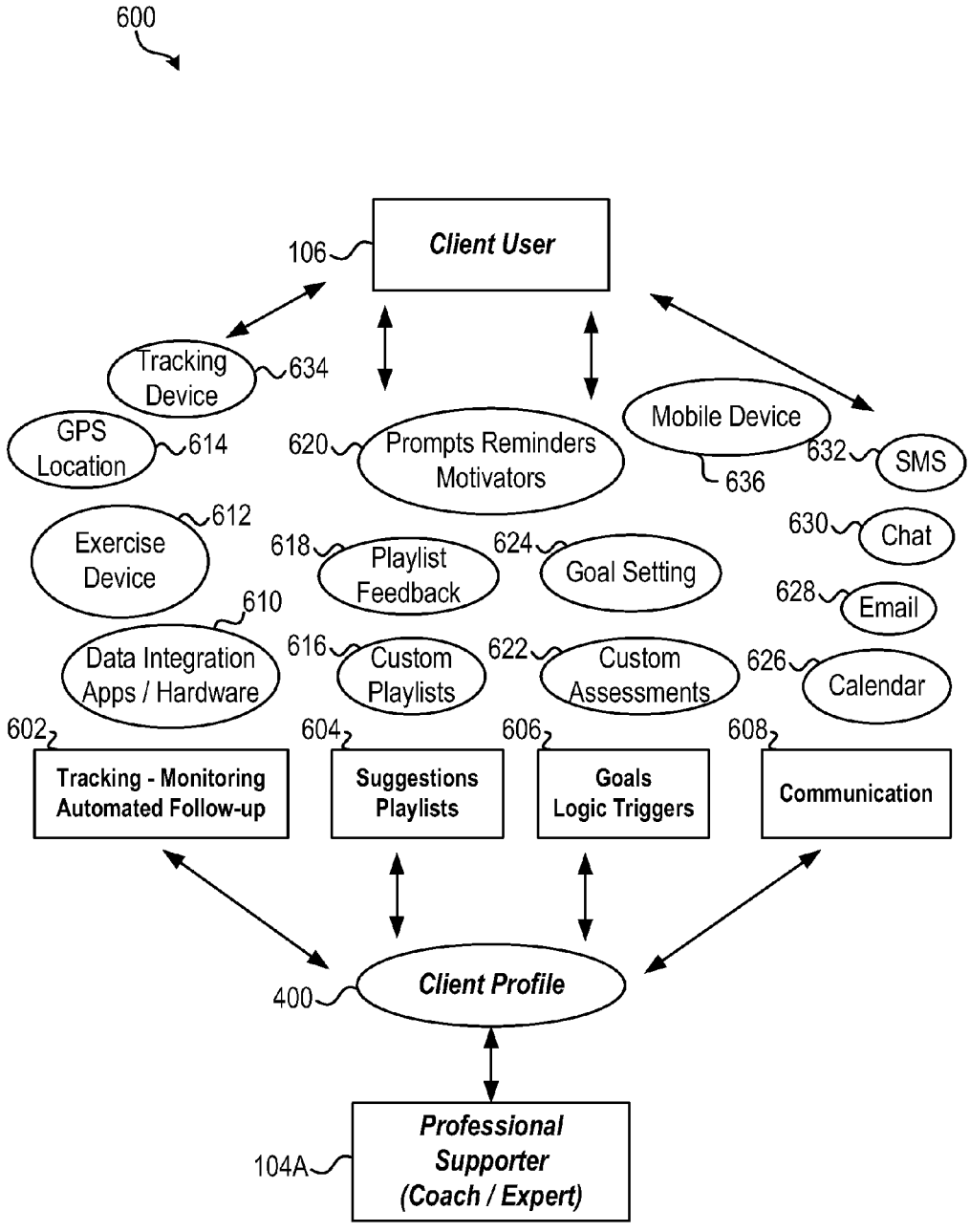

600
106
Client User
Tracking Device
634
GPS Location
614
620
Prompts Reminders Motivators
Mobile Device
636
632
SMS
612
Exercise Device
618
Playlist Feedback
624
Goal Setting
630
Chat
628
Email
610
Data Integration Apps / Hardware
616
Custom Playlists
622
Custom Assessments
626
Calendar
602
Tracking - Monitoring Automated Follow-up
604
Suggestions Playlists
606
Goals Logic Triggers
608
Communication
400
Client Profile
104A
Professional Supporter (Coach / Expert)

FIG. 6A

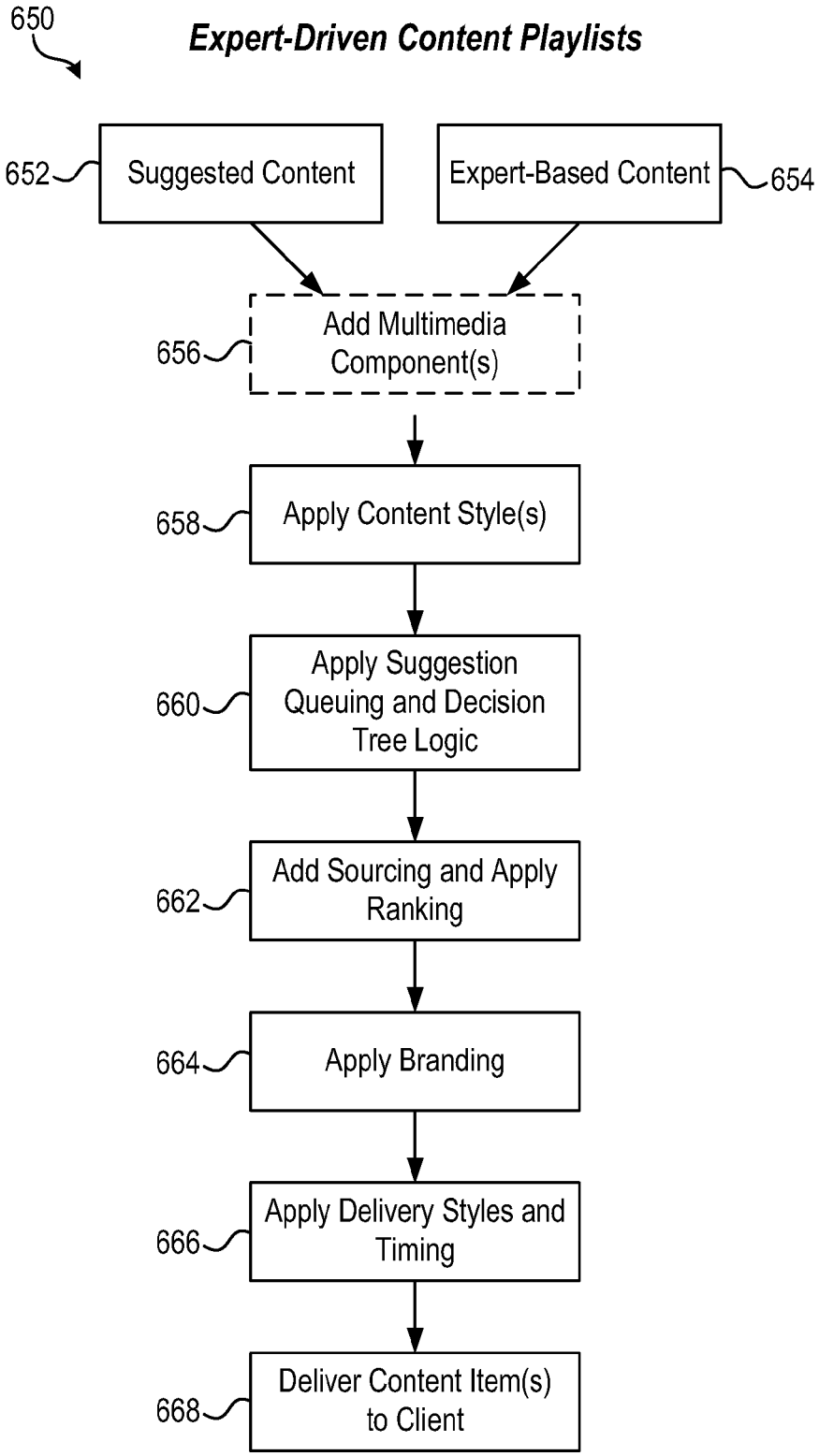

650
Expert-Driven Content Playlists
652
Suggested Content
Expert-Based Content
654
Add Multimedia Component(s)
656
Apply Content Style(s)
658
Apply Suggestion Queuing and Decision Tree Logic
660
Add Sourcing and Apply Ranking
662
Apply Branding
664
Apply Delivery Styles and Timing
666
Deliver Content Item(s) to Client
668

FIG. 6B

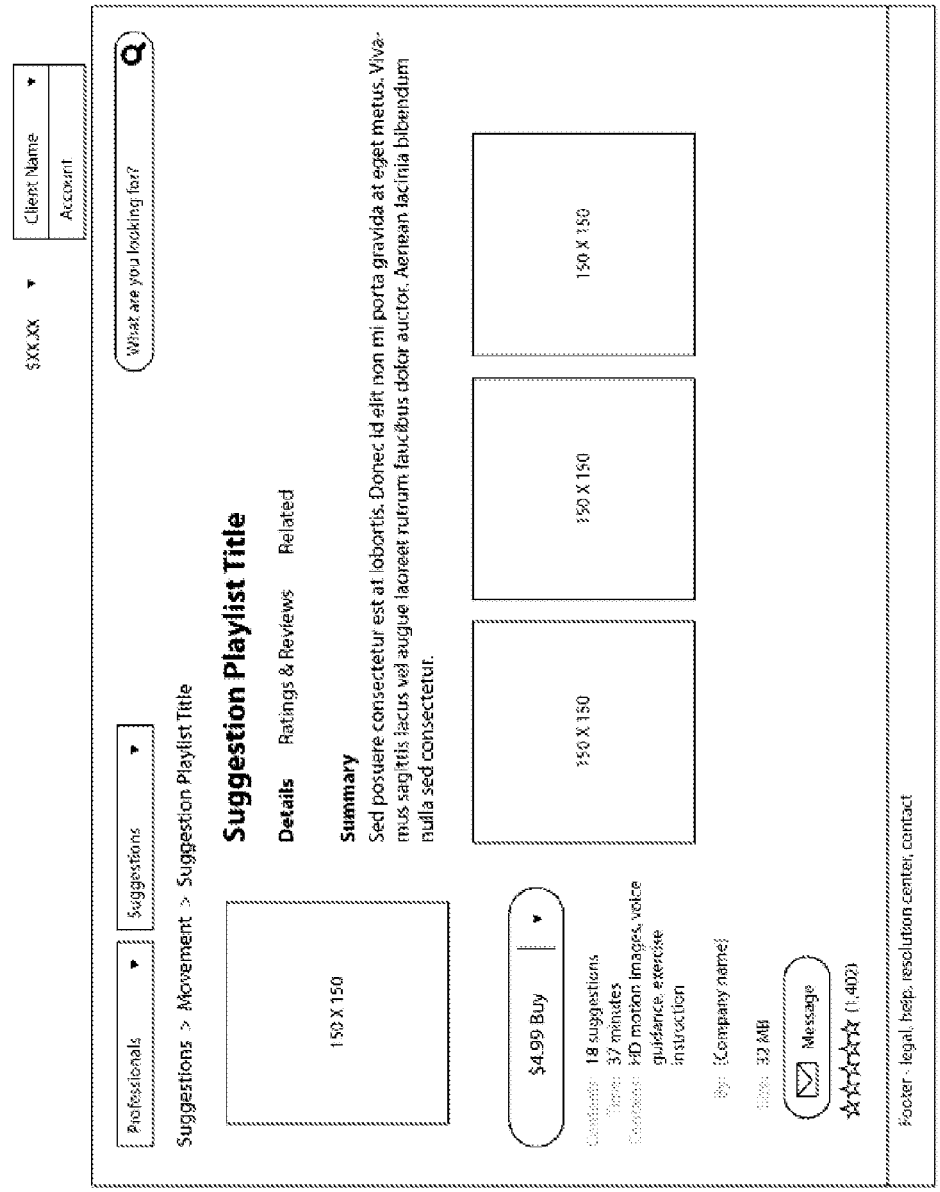

700A
$XX.XX
Client Name
Account
What are you looking for?
Professionals
Suggestions
Suggestions > Movement > Suggestion Playlist Title
Suggestion Playlist Title
Details
Ratings & Reviews
Related
Summary
Sed posuere consectetur est at lobortis. Donec id elit non mi porta gravida at eget metus. Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Aenean lacinia bibendum nulla sed consectetur.
150 X 150
$4.99 Buy
18 suggestions
37 minutes
HD motion images, voice guidance, exercise instruction
By: {Company name}
33 MB
Message
(1,402)
150 X 150
150 X 150
150 X 150
Footer - legal, help, resolution center, contact

FIG. 7A

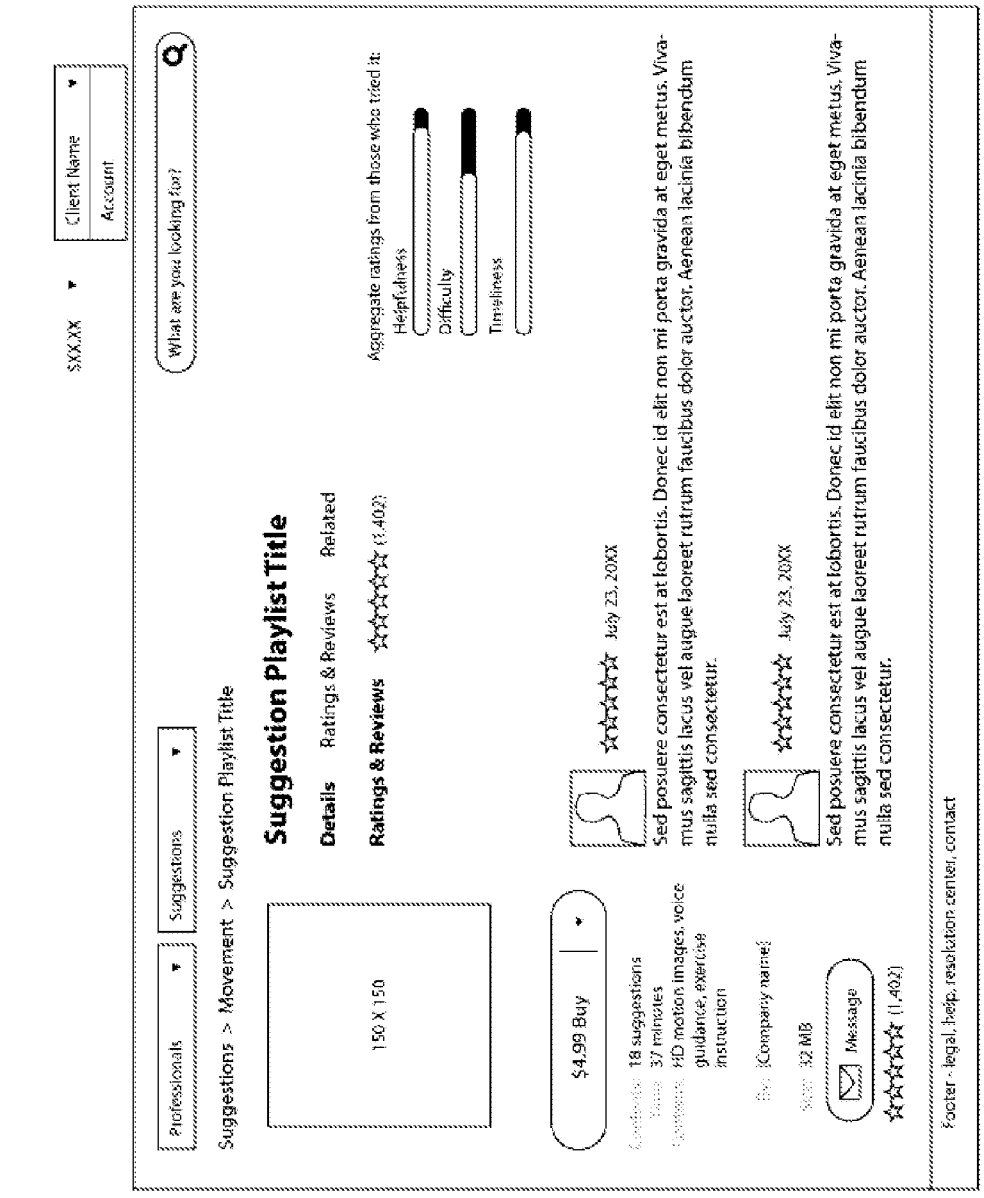

700B
SXXXX
Client Name
Account
Professionals
Suggestions
What are you looking for?
Suggestions > Movement > Suggestion Playlist Title
Suggestion Playlist Title
Details
Ratings & Reviews
Related
150 X 150
Ratings & Reviews
(1,402)
Aggregate ratings from those who tried it:
Helpfulness
Difficulty
Timeliness
$4.99 Buy
July 23, 20XX
Sed posuere consectetur est at lobortis. Donec id elit non mi porta gravida at eget metus. Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Aenean lacinia bibendum nulla sed consectetur.
18 suggestions
37 minutes
HD motion images, voice guidance, exercise instruction
{Company name}
32 MB
Message
(1,402)
July 23, 20XX
Sed posuere consectetur est at lobortis. Donec id elit non mi porta gravida at eget metus. Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Aenean lacinia bibendum nulla sed consectetur.
Footer - legal, help, resolution center, contact

FIG. 7B

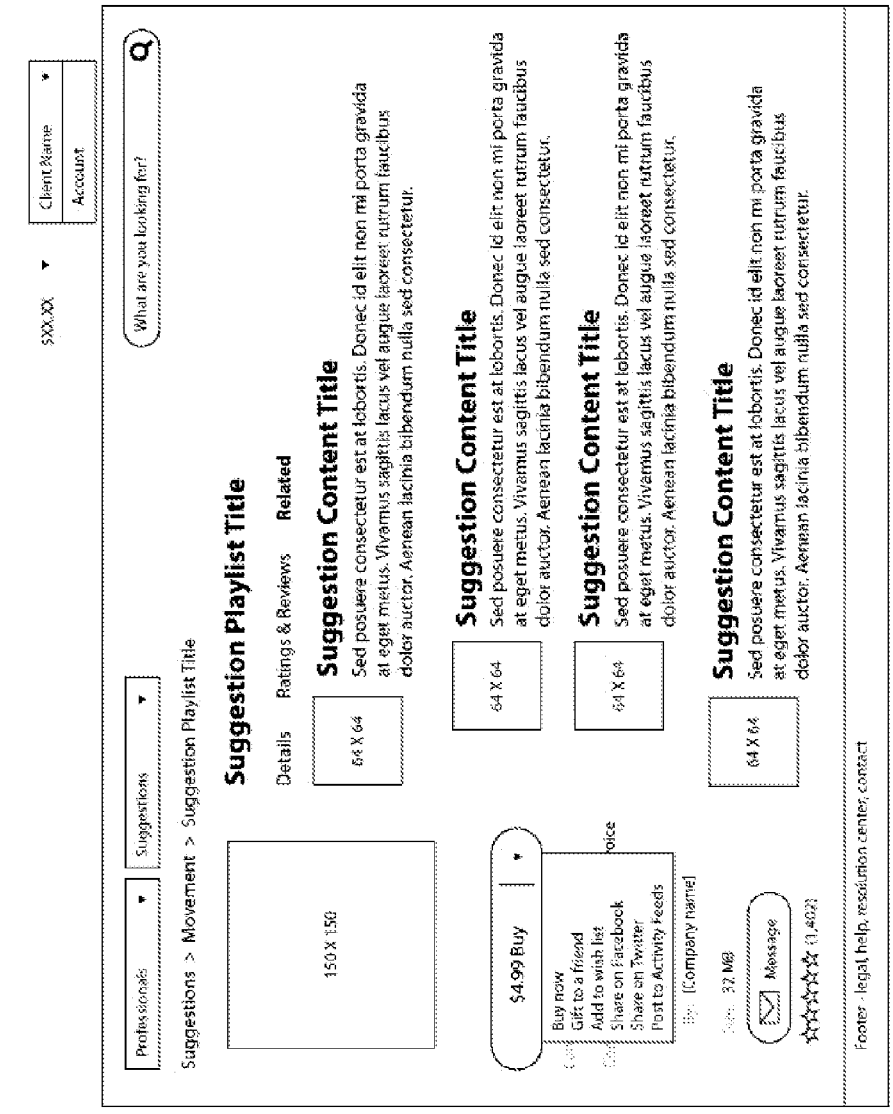

700C
$XX.XX
Client Name
Account
Professionals
Suggestions
What are you looking for?
Suggestions > Movement > Suggestion Playlist Title
Suggestion Playlist Title
Details
Ratings & Reviews
Related
150 X 150
64 X 64
Suggestion Content Title
Sed posuere consectetur est at lobortis. Donec id elit non mi porta gravida at eget metus. Vivamus sagittis lacus vel augue laoreet rutrum faucibus dolor auctor. Aenean lacinia bibendum nulla sed consectetur.
$4.99 Buy
Buy now
Gift to a friend
Add to wish list
Share on Facebook
Share on Twitter
Post to Activity Feeds
[Company name]
Message
Footer - legal help, resolution center, contact

FIG. 7C

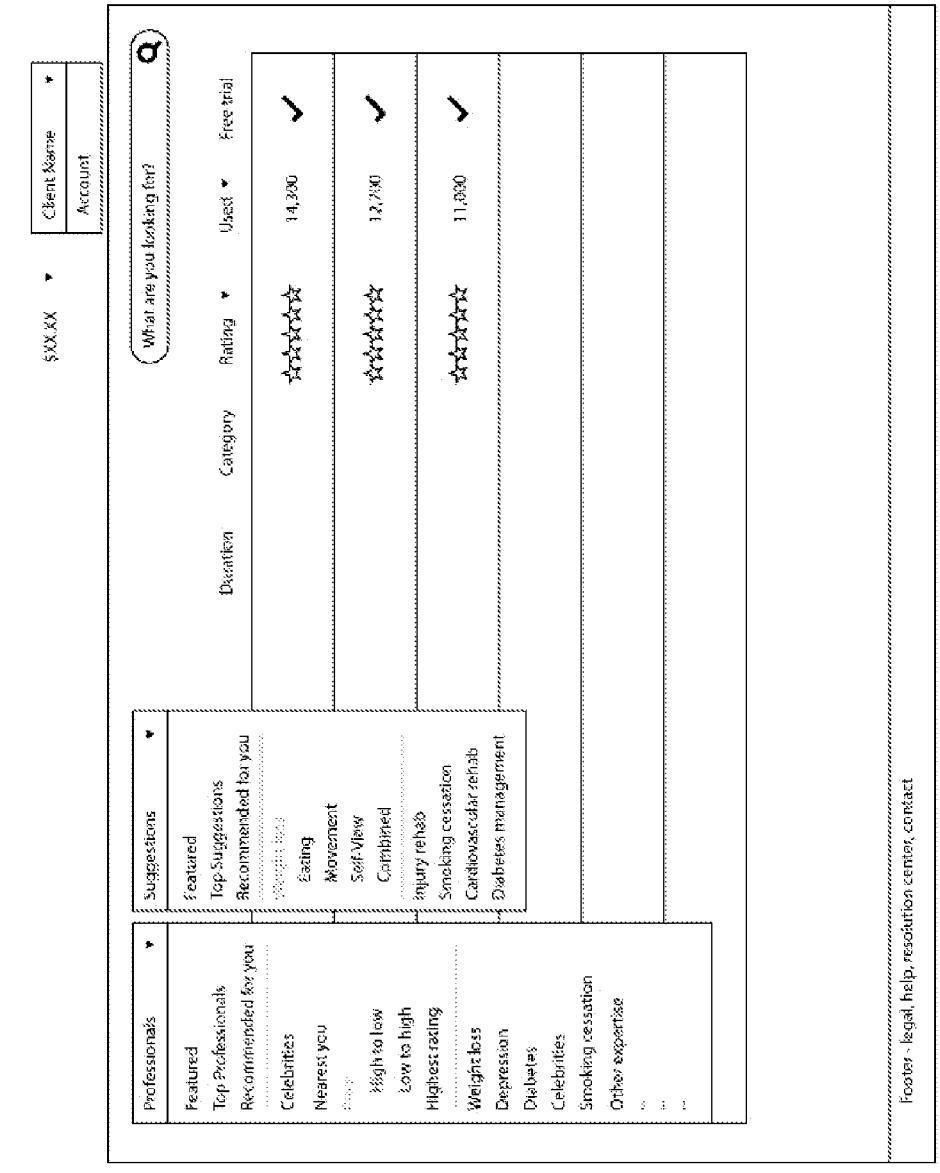
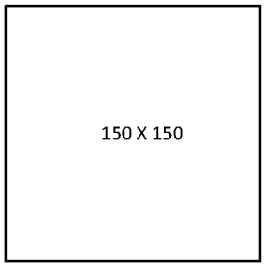

700D
$XX.XX
Client Name
Account
What are you looking for?
Professionals
Featured
Top Professionals
Recommended for you
Celebrities
Nearest you
High to low
Low to high
Highest rating
Weight loss
Depression
Diabetes
Celebrities
Smoking cessation
Other expertise
Suggestions
Featured
Top Suggestions
Recommended for you
Eating
Movement
Self-View
Combined
Injury rehab
Smoking cessation
Cardiovascular rehab
Diabetes management
Duration
Category
Rating
Used
Free trial
14,300
12,700
11,000
Footer - legal, help, resolution center, contact

FIG. 7D

700E

My Suggestions > Playlists > Suggestion Playlist Title

Professional Name ▼



Contents: X X suggestions
Time: X minutes
Contains: Reminders, motivators, HD motion images, voice guidance, instruction

By: [Entity]

Size: 32 MB

☆☆☆☆☆ (1,402)

Suggestion Playlist Title

☰	1	64 X 64	**Suggestion Content Title** 24 hours 15 min Repeat 3 times ∨	2 reminders 3 motivators	>
☰	2	64 X 64	**Suggestion Content Title** 24 hours 15 min Repeat 3 times	1 reminders 2 motivators	>
☰	3	64 X 64	**Suggestion Content Title** 24 hours 15 min Repeat 3 times	1 reminders 2 motivators	>
☰	4	64 X 64	**Suggestion Content Title** 24 hours 15 min Repeat 3 times	1 reminders 2 motivators	>

+ Add Suggestion to playlist

FIG. 7E

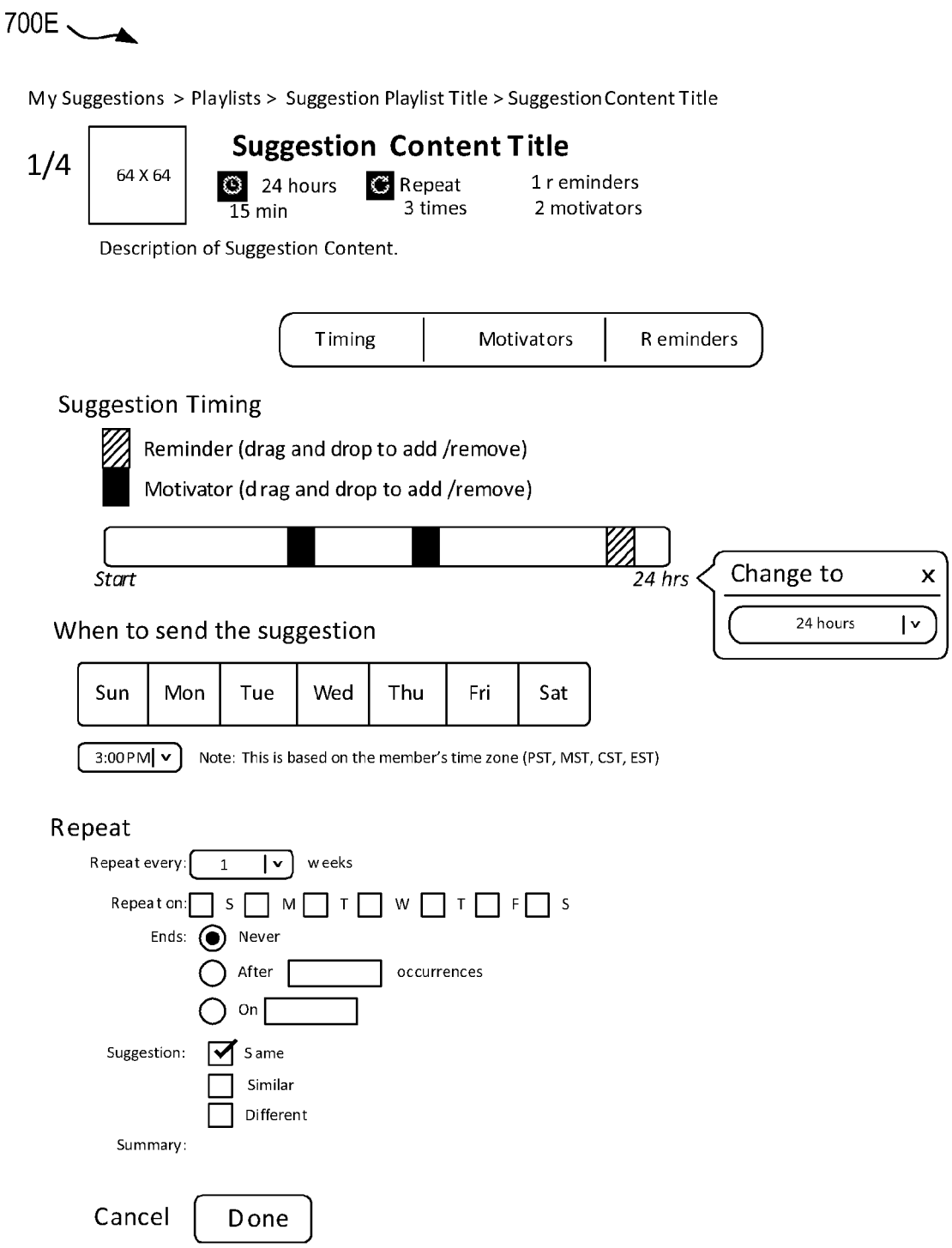

700E
My Suggestions > Playlists > Suggestion Playlist Title > Suggestion Content Title
1/4
64 X 64
Suggestion Content Title
24 hours
15 min
Repeat
3 times
1 r eminders
2 motivators
Description of Suggestion Content.
Timing
Motivators
R eminders
Suggestion Timing
Reminder (drag and drop to add /remove)
Motivator (drag and drop to add /remove)
Start
24 hrs
Change to
x
24 hours
When to send the suggestion
Sun
Mon
Tue
Wed
Thu
Fri
Sat
3:00 PM
Note: This is based on the member's time zone (PST, MST, CST, EST)
Repeat
Repeat every:
1
weeks
Repeat on:
S
M
T
W
T
F
S
Ends:
Never
After
occurrences
On
Suggestion:
Same
Similar
Different
Summary:
Cancel
Done

FIG. 7F

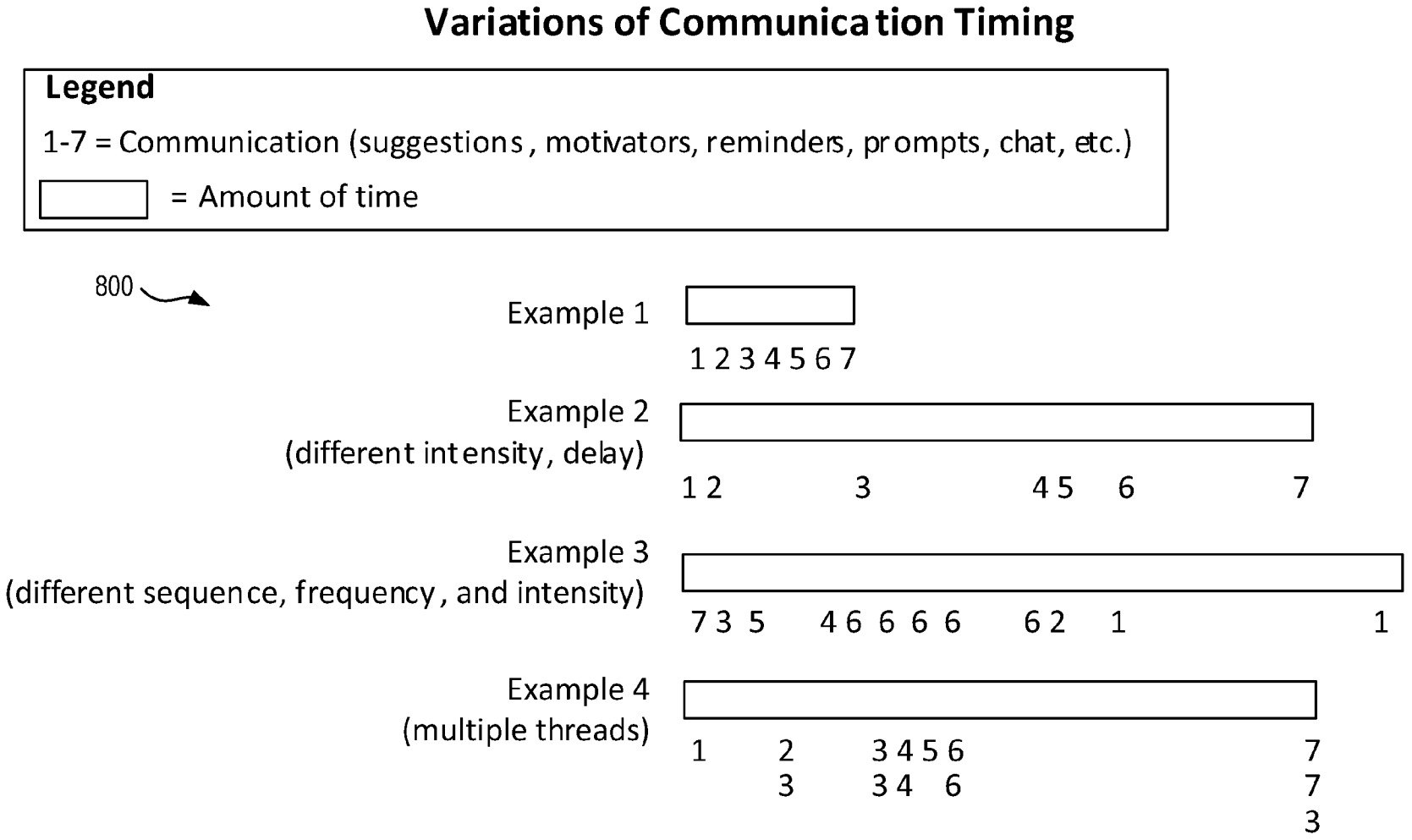

Variations of Communication Timing
Legend
1-7 = Communication (suggestions, motivators, reminders, prompts, chat, etc.)
= Amount of time
800
Example 1
1 2 3 4 5 6 7
Example 2
(different intensity, delay)
1 2
3
4 5
6
7
Example 3
(different sequence, frequency, and intensity)
7 3 5
4 6 6 6 6
6 2
1
1
Example 4
(multiple threads)
1
2
3
3 4 5 6
3 4
6
7
7
3

FIG. 8A

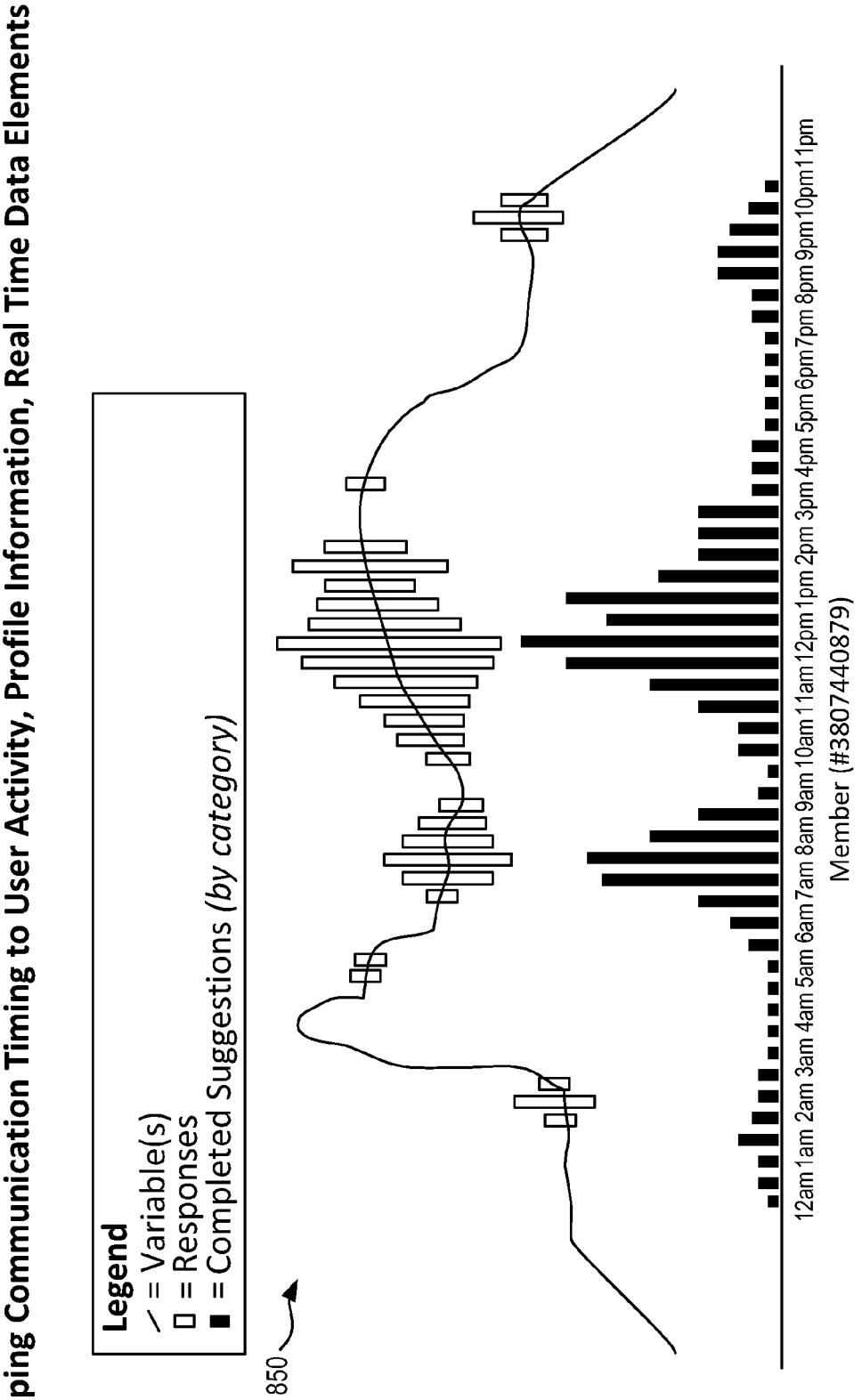

Mapping Communication Timing to User Activity, Profile Information, Real Time Data Elements
Legend
/ = Variable(s)
□ = Responses
■ = Completed Suggestions (by category)
850
12am 1am 2am 3am 4am 5am 6am 7am 8am 9am 10am 11am 12pm 1pm 2pm 3pm 4pm 5pm 6pm 7pm 8pm 9pm 10pm 11pm
Member (#3807440879)

FIG. 8B

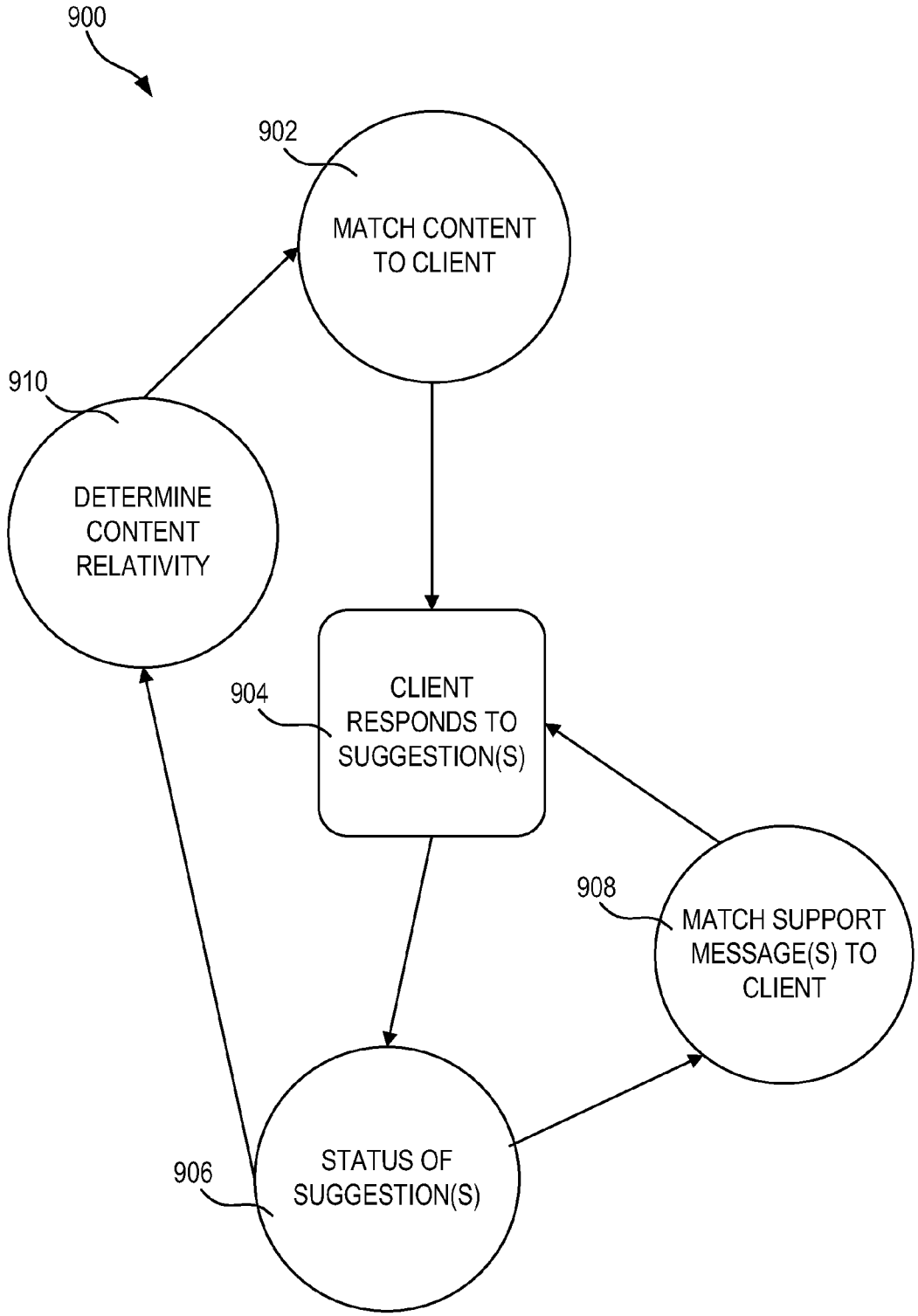

900
902
MATCH CONTENT TO CLIENT
910
DETERMINE CONTENT RELATIVITY
904
CLIENT RESPONDS TO SUGGESTION(S)
908
MATCH SUPPORT MESSAGE(S) TO CLIENT
906
STATUS OF SUGGESTION(S)

FIG. 9A

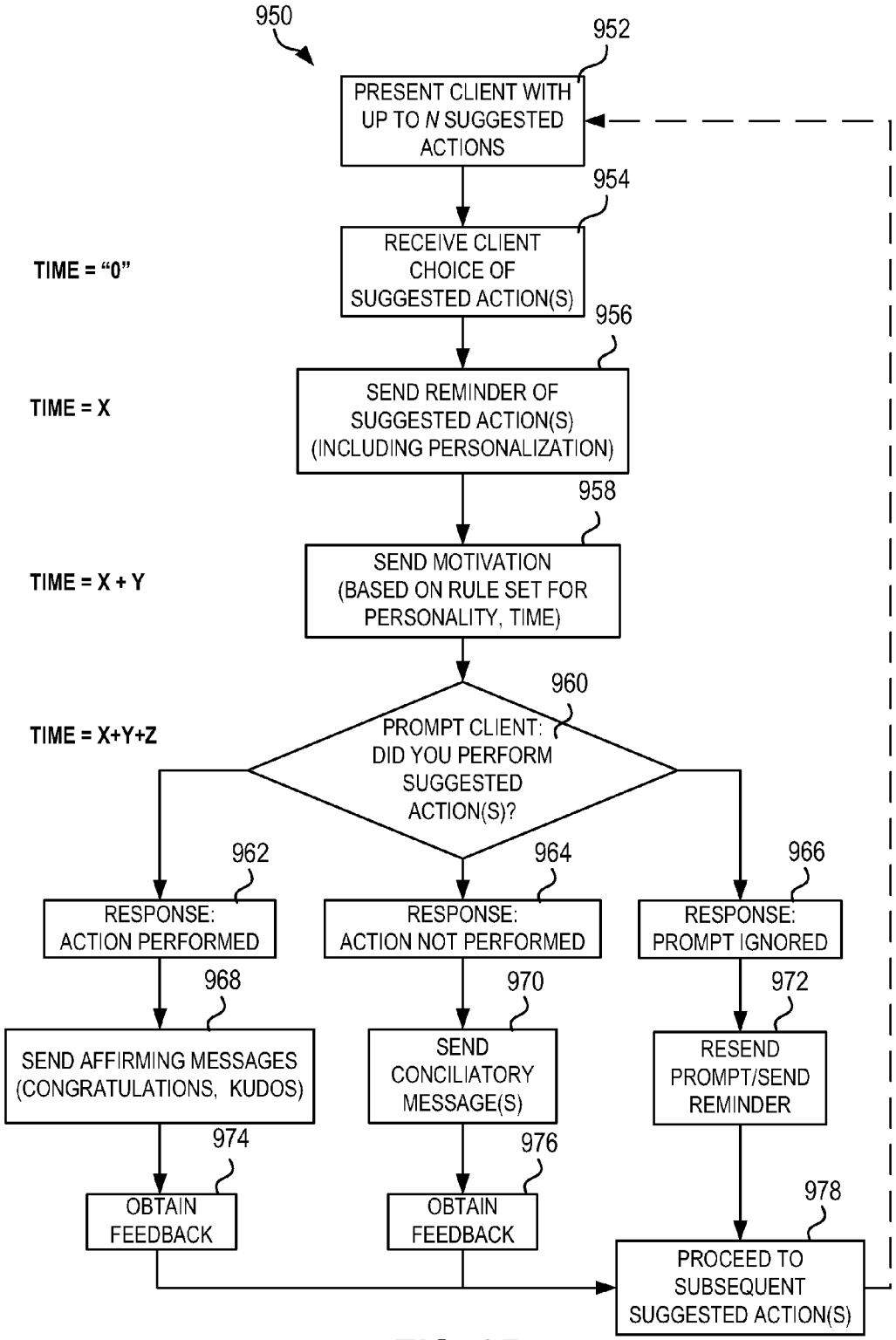

950
952
PRESENT CLIENT WITH UP TO N SUGGESTED ACTIONS
954
RECEIVE CLIENT CHOICE OF SUGGESTED ACTION(S)
TIME = "0"
956
SEND REMINDER OF SUGGESTED ACTION(S) (INCLUDING PERSONALIZATION)
TIME = X
958
SEND MOTIVATION (BASED ON RULE SET FOR PERSONALITY, TIME)
TIME = X + Y
960
PROMPT CLIENT: DID YOU PERFORM SUGGESTED ACTION(S)?
TIME = X+Y+Z
962
RESPONSE: ACTION PERFORMED
964
RESPONSE: ACTION NOT PERFORMED
966
RESPONSE: PROMPT IGNORED
968
SEND AFFIRMING MESSAGES (CONGRATULATIONS, KUDOS)
970
SEND CONCILIATORY MESSAGE(S)
972
RESEND PROMPT/SEND REMINDER
974
OBTAIN FEEDBACK
976
OBTAIN FEEDBACK
978
PROCEED TO SUBSEQUENT SUGGESTED ACTION(S)

FIG. 9B

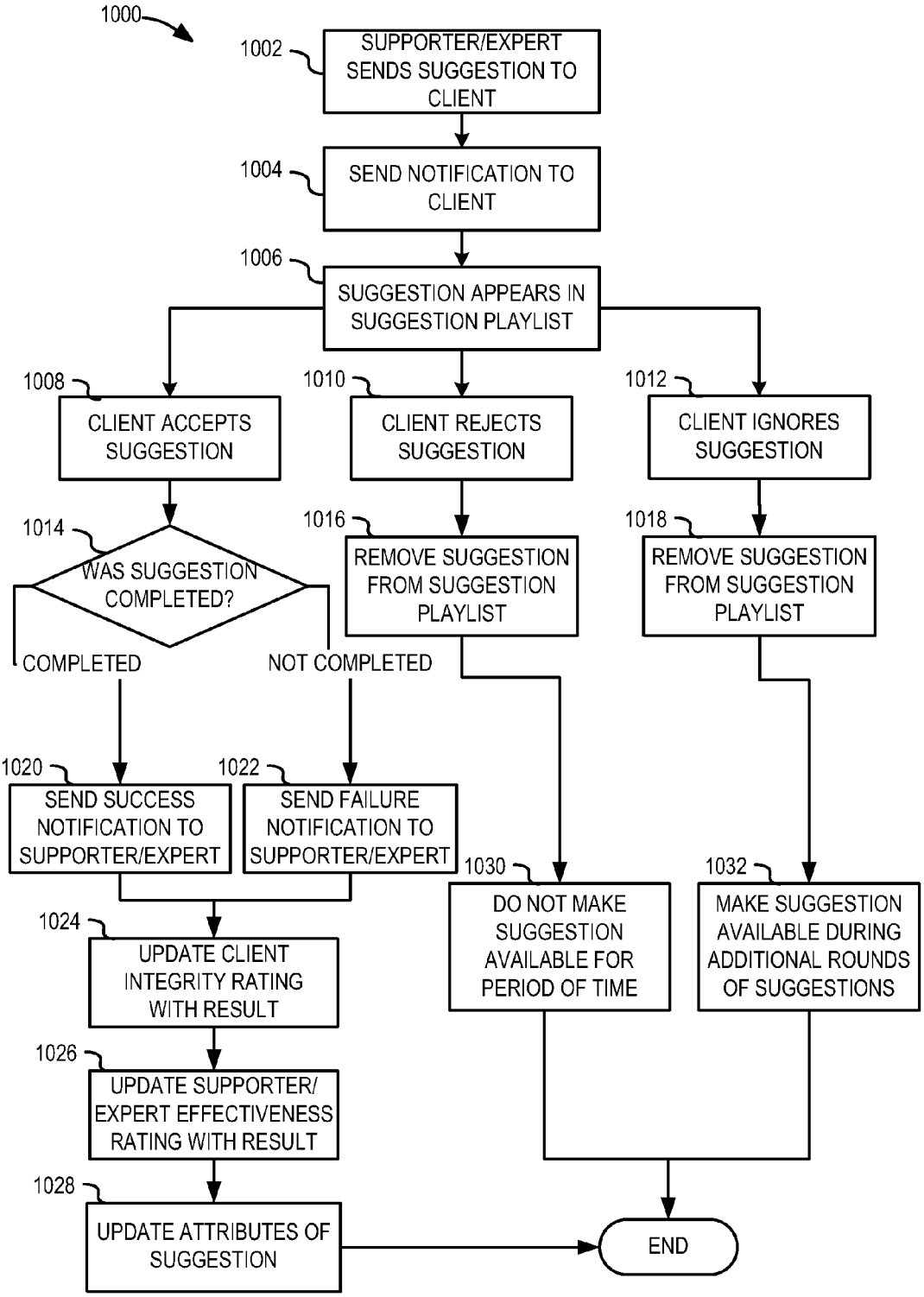

1000
1002
SUPPORTER/EXPERT SENDS SUGGESTION TO CLIENT
1004
SEND NOTIFICATION TO CLIENT
1006
SUGGESTION APPEARS IN SUGGESTION PLAYLIST
1008
CLIENT ACCEPTS SUGGESTION
1010
CLIENT REJECTS SUGGESTION
1012
CLIENT IGNORES SUGGESTION
1014
WAS SUGGESTION COMPLETED?
COMPLETED
NOT COMPLETED
1016
REMOVE SUGGESTION FROM SUGGESTION PLAYLIST
1018
REMOVE SUGGESTION FROM SUGGESTION PLAYLIST
1020
SEND SUCCESS NOTIFICATION TO SUPPORTER/EXPERT
1022
SEND FAILURE NOTIFICATION TO SUPPORTER/EXPERT
1030
DO NOT MAKE SUGGESTION AVAILABLE FOR PERIOD OF TIME
1032
MAKE SUGGESTION AVAILABLE DURING ADDITIONAL ROUNDS OF SUGGESTIONS
1024
UPDATE CLIENT INTEGRITY RATING WITH RESULT
1026
UPDATE SUPPORTER/ EXPERT EFFECTIVENESS RATING WITH RESULT
1028
UPDATE ATTRIBUTES OF SUGGESTION
END

FIG. 10

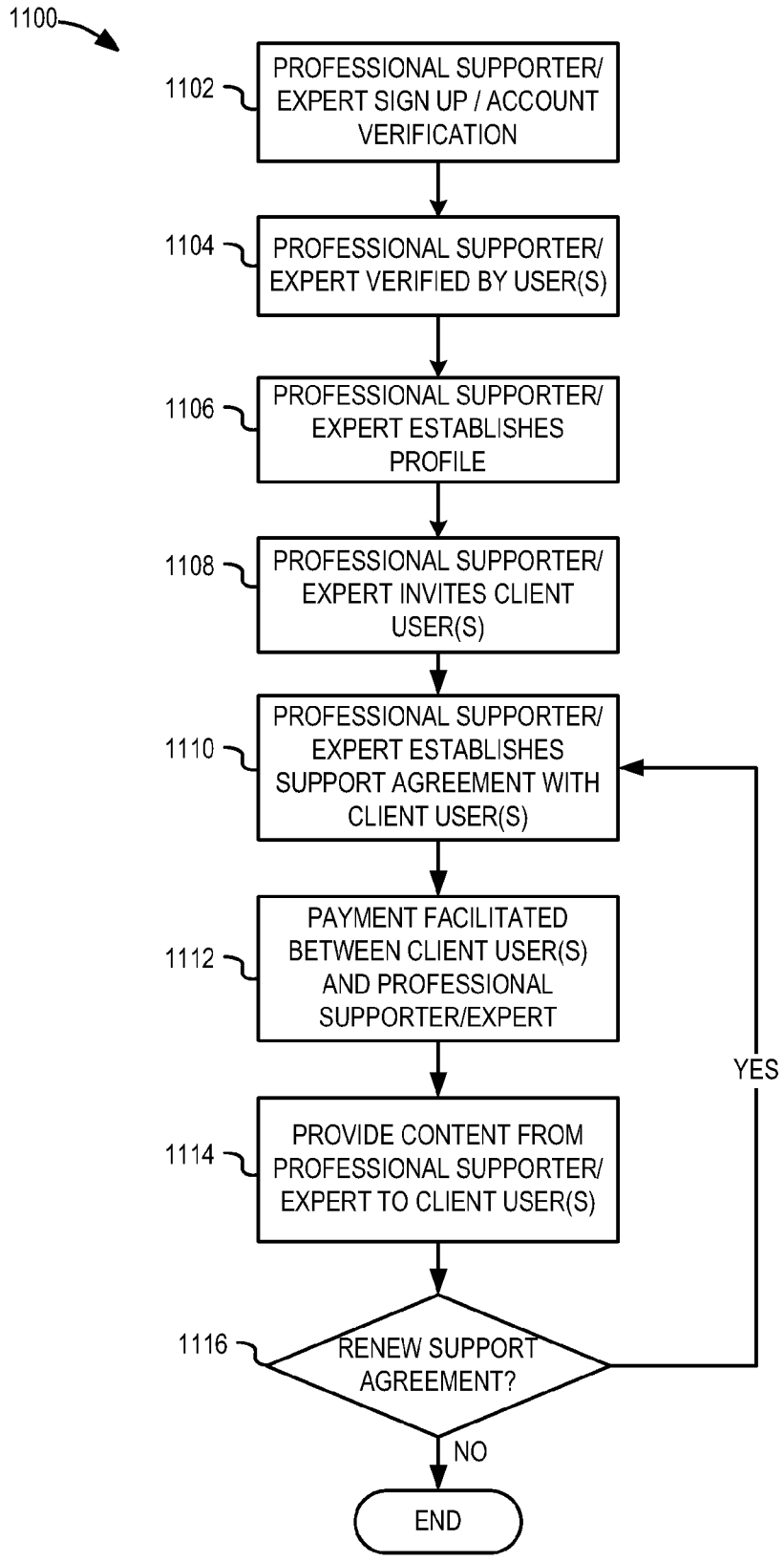

1100
1102
PROFESSIONAL SUPPORTER/ EXPERT SIGN UP / ACCOUNT VERIFICATION
1104
PROFESSIONAL SUPPORTER/ EXPERT VERIFIED BY USER(S)
1106
PROFESSIONAL SUPPORTER/ EXPERT ESTABLISHES PROFILE
1108
PROFESSIONAL SUPPORTER/ EXPERT INVITES CLIENT USER(S)
1110
PROFESSIONAL SUPPORTER/ EXPERT ESTABLISHES SUPPORT AGREEMENT WITH CLIENT USER(S)
1112
PAYMENT FACILITATED BETWEEN CLIENT USER(S) AND PROFESSIONAL SUPPORTER/EXPERT
1114
PROVIDE CONTENT FROM PROFESSIONAL SUPPORTER/ EXPERT TO CLIENT USER(S)
1116
RENEW SUPPORT AGREEMENT?
YES
NO
END

FIG. 11

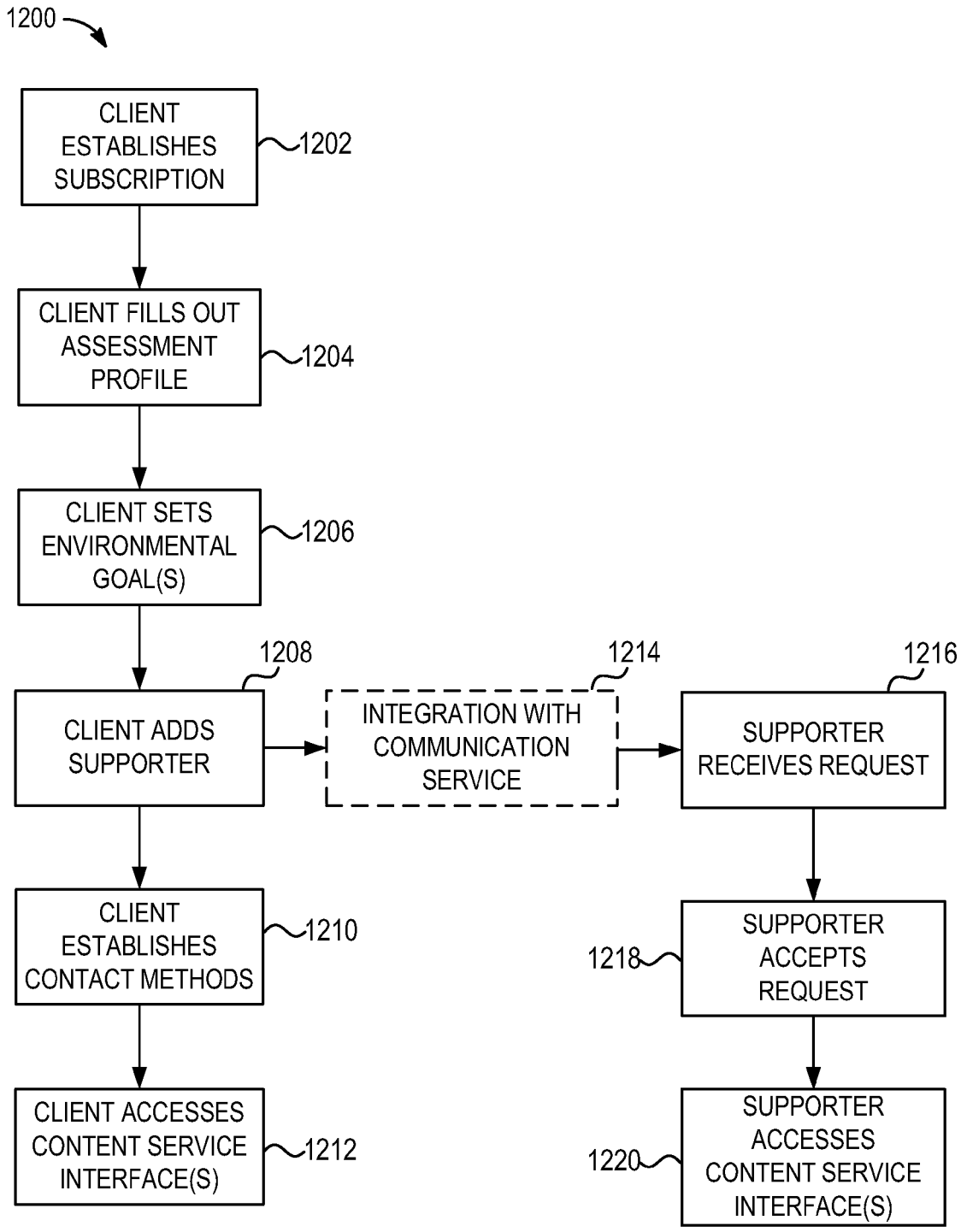

1200
CLIENT ESTABLISHES SUBSCRIPTION
1202
CLIENT FILLS OUT ASSESSMENT PROFILE
1204
CLIENT SETS ENVIRONMENTAL GOAL(S)
1206
1208
CLIENT ADDS SUPPORTER
1214
INTEGRATION WITH COMMUNICATION SERVICE
1216
SUPPORTER RECEIVES REQUEST
CLIENT ESTABLISHES CONTACT METHODS
1210
1218
SUPPORTER ACCEPTS REQUEST
CLIENT ACCESSES CONTENT SERVICE INTERFACE(S)
1212
1220
SUPPORTER ACCESSES CONTENT SERVICE INTERFACE(S)

FIG. 12A

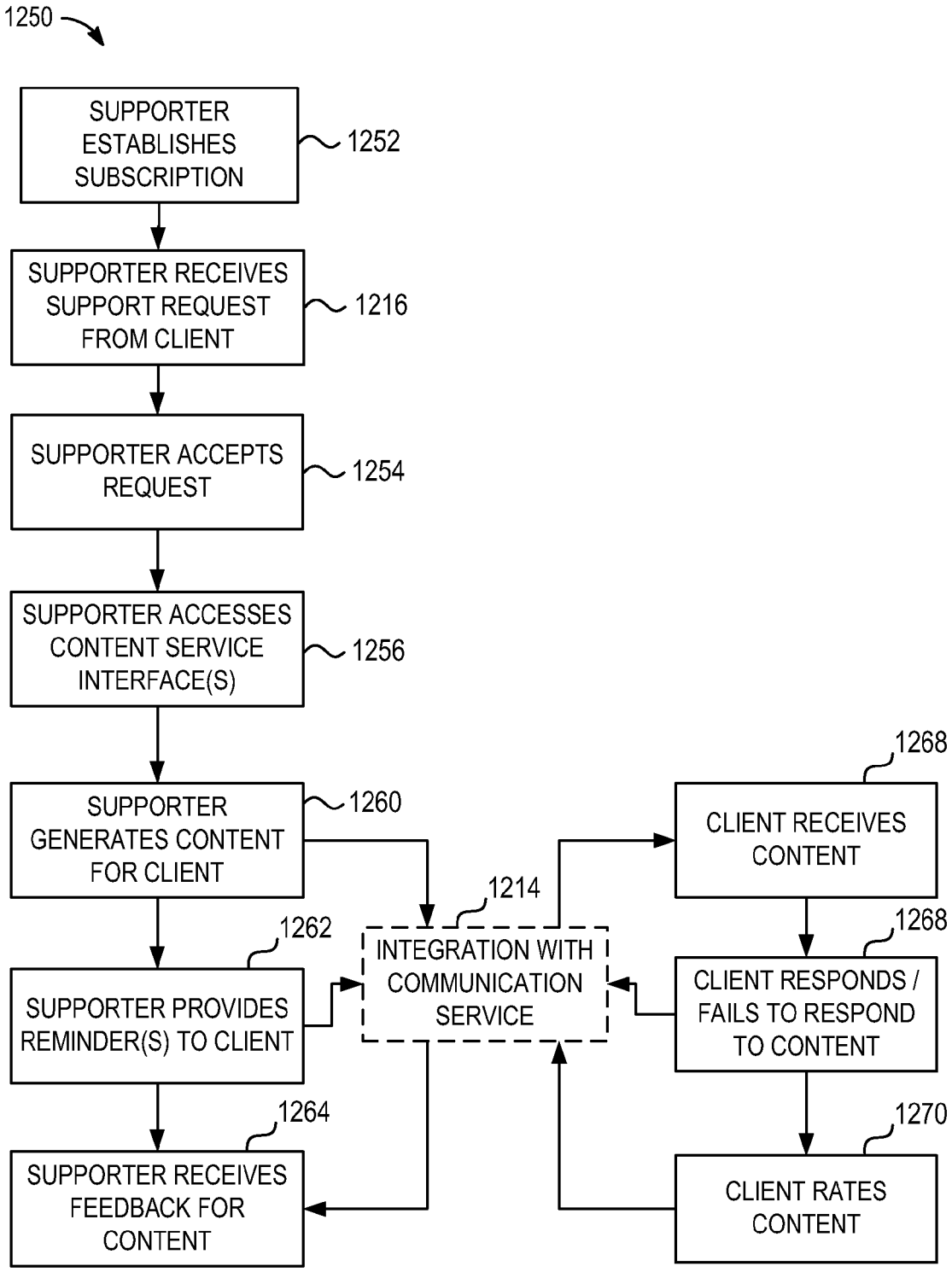

1250
SUPPORTER ESTABLISHES SUBSCRIPTION
1252
SUPPORTER RECEIVES SUPPORT REQUEST FROM CLIENT
1216
SUPPORTER ACCEPTS REQUEST
1254
SUPPORTER ACCESSES CONTENT SERVICE INTERFACE(S)
1256
SUPPORTER GENERATES CONTENT FOR CLIENT
1260
1214
INTEGRATION WITH COMMUNICATION SERVICE
1262
SUPPORTER PROVIDES REMINDER(S) TO CLIENT
1264
SUPPORTER RECEIVES FEEDBACK FOR CONTENT
1268
CLIENT RECEIVES CONTENT
1268
CLIENT RESPONDS / FAILS TO RESPOND TO CONTENT
1270
CLIENT RATES CONTENT

FIG. 12B

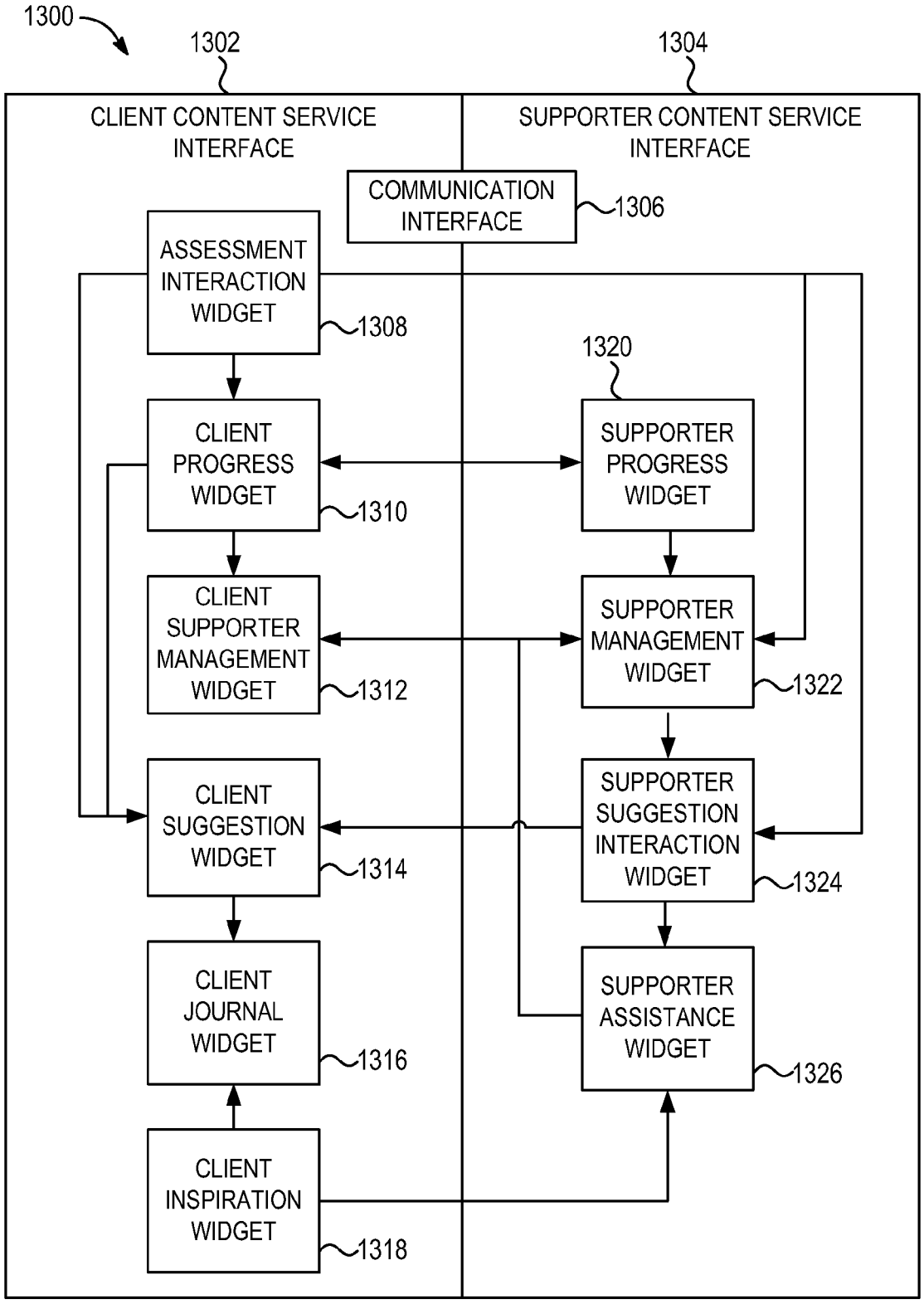

1300
1302
1304
CLIENT CONTENT SERVICE INTERFACE
SUPPORTER CONTENT SERVICE INTERFACE
COMMUNICATION INTERFACE
1306
ASSESSMENT INTERACTION WIDGET
1308
1320
CLIENT PROGRESS WIDGET
1310
SUPPORTER PROGRESS WIDGET
CLIENT SUPPORTER MANAGEMENT WIDGET
1312
SUPPORTER MANAGEMENT WIDGET
1322
CLIENT SUGGESTION WIDGET
1314
SUPPORTER SUGGESTION INTERACTION WIDGET
1324
CLIENT JOURNAL WIDGET
1316
SUPPORTER ASSISTANCE WIDGET
1326
CLIENT INSPIRATION WIDGET
1318

FIG. 13

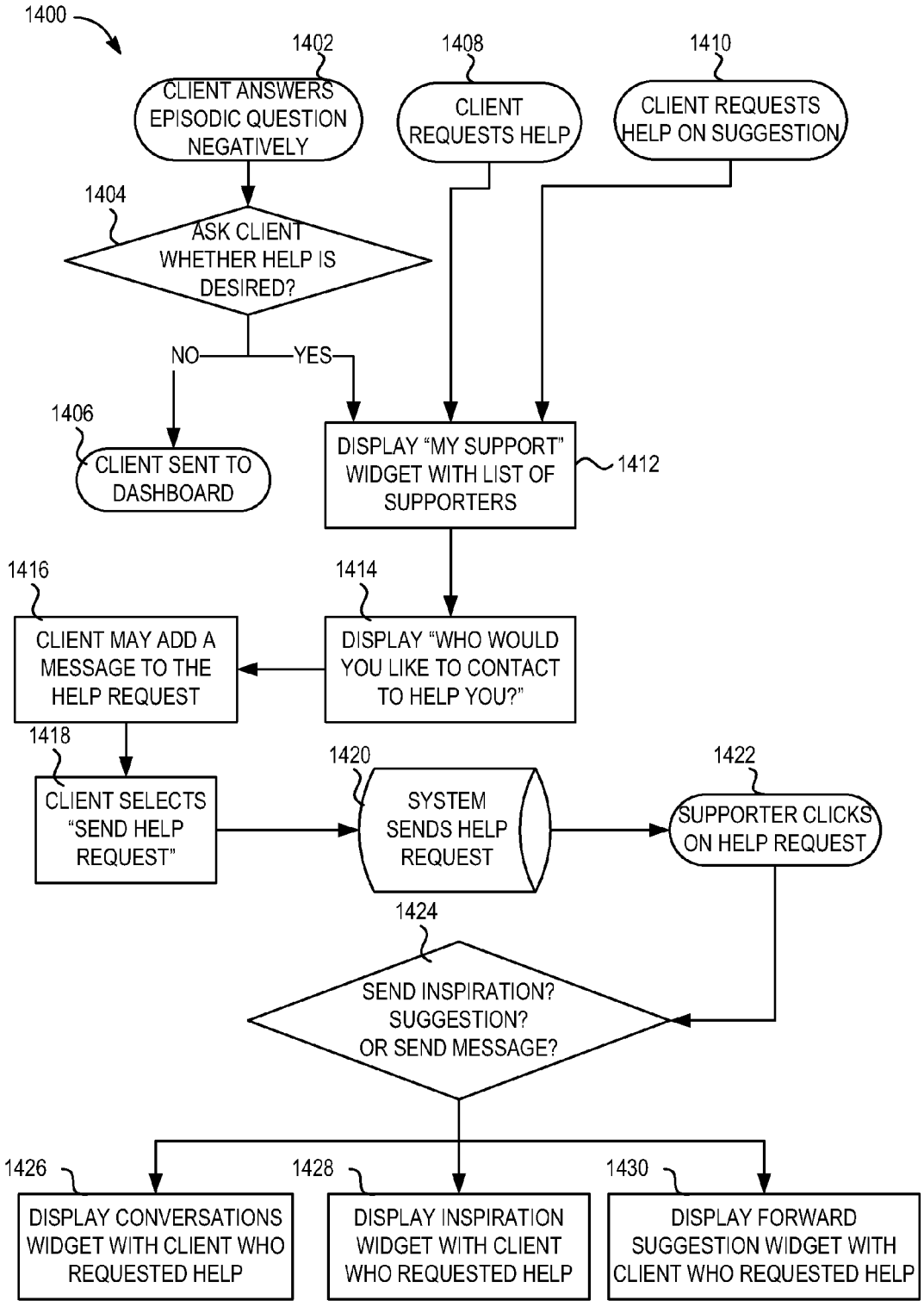

1400
1402
CLIENT ANSWERS EPISODIC QUESTION NEGATIVELY
1408
CLIENT REQUESTS HELP
1410
CLIENT REQUESTS HELP ON SUGGESTION
1404
ASK CLIENT WHETHER HELP IS DESIRED?
NO
YES
1406
CLIENT SENT TO DASHBOARD
DISPLAY "MY SUPPORT" WIDGET WITH LIST OF SUPPORTERS
1412
1416
CLIENT MAY ADD A MESSAGE TO THE HELP REQUEST
1414
DISPLAY "WHO WOULD YOU LIKE TO CONTACT TO HELP YOU?"
1418
CLIENT SELECTS "SEND HELP REQUEST"
1420
SYSTEM SENDS HELP REQUEST
1422
SUPPORTER CLICKS ON HELP REQUEST
1424
SEND INSPIRATION? SUGGESTION? OR SEND MESSAGE?
1426
DISPLAY CONVERSATIONS WIDGET WITH CLIENT WHO REQUESTED HELP
1428
DISPLAY INSPIRATION WIDGET WITH CLIENT WHO REQUESTED HELP
1430
DISPLAY FORWARD SUGGESTION WIDGET WITH CLIENT WHO REQUESTED HELP

FIG. 14

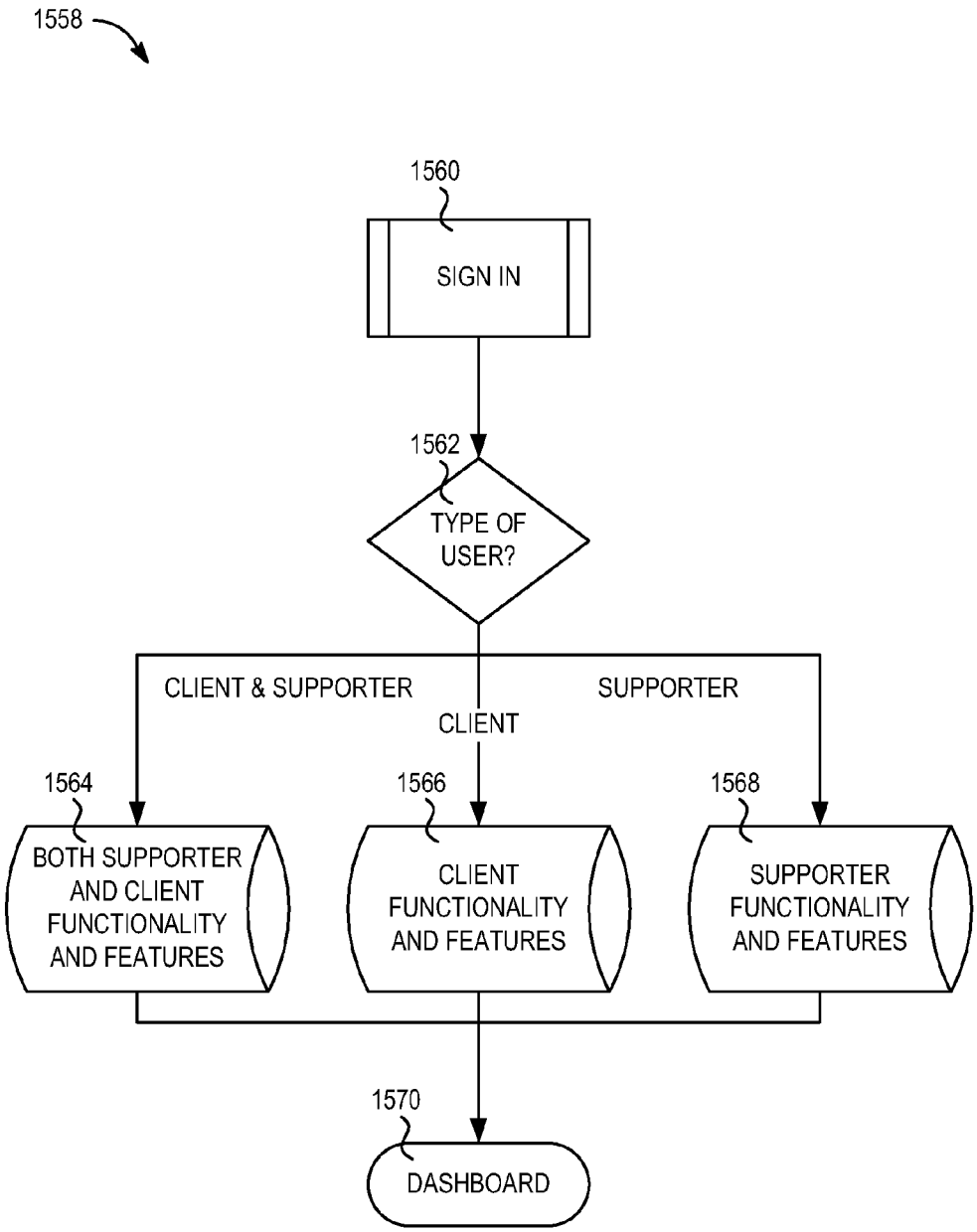

1558
1560
SIGN IN
1562
TYPE OF USER?
CLIENT & SUPPORTER
CLIENT
SUPPORTER
1564
BOTH SUPPORTER AND CLIENT FUNCTIONALITY AND FEATURES
1566
CLIENT FUNCTIONALITY AND FEATURES
1568
SUPPORTER FUNCTIONALITY AND FEATURES
1570
DASHBOARD

FIG. 15

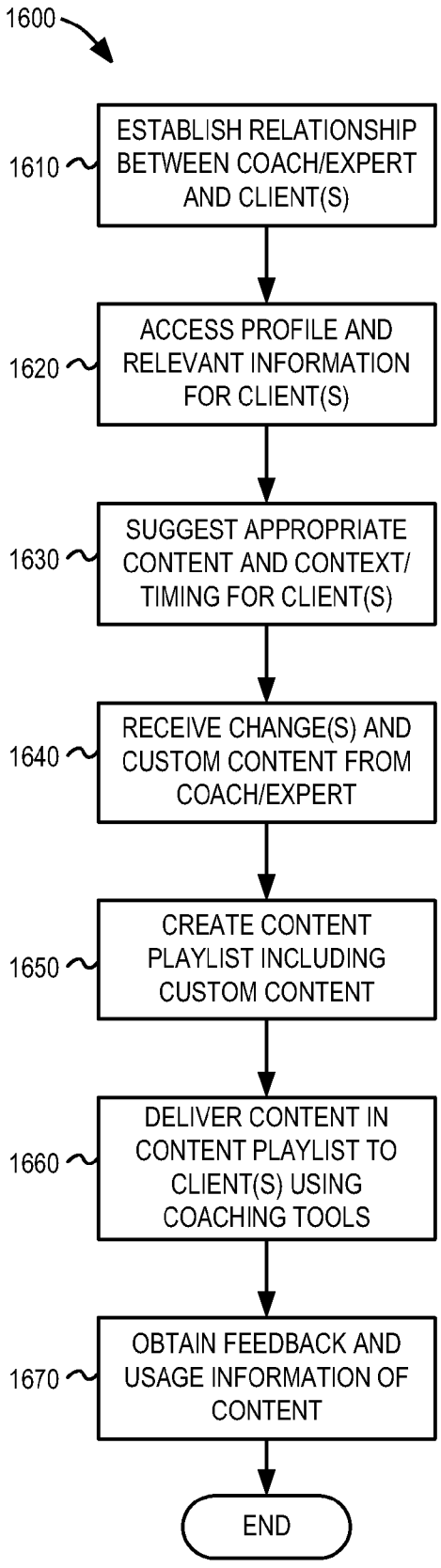

1600
1610
ESTABLISH RELATIONSHIP BETWEEN COACH/EXPERT AND CLIENT(S)
1620
ACCESS PROFILE AND RELEVANT INFORMATION FOR CLIENT(S)
1630
SUGGEST APPROPRIATE CONTENT AND CONTEXT/ TIMING FOR CLIENT(S)
1640
RECEIVE CHANGE(S) AND CUSTOM CONTENT FROM COACH/EXPERT
1650
CREATE CONTENT PLAYLIST INCLUDING CUSTOM CONTENT
1660
DELIVER CONTENT IN CONTENT PLAYLIST TO CLIENT(S) USING COACHING TOOLS
1670
OBTAIN FEEDBACK AND USAGE INFORMATION OF CONTENT
END

FIG. 16

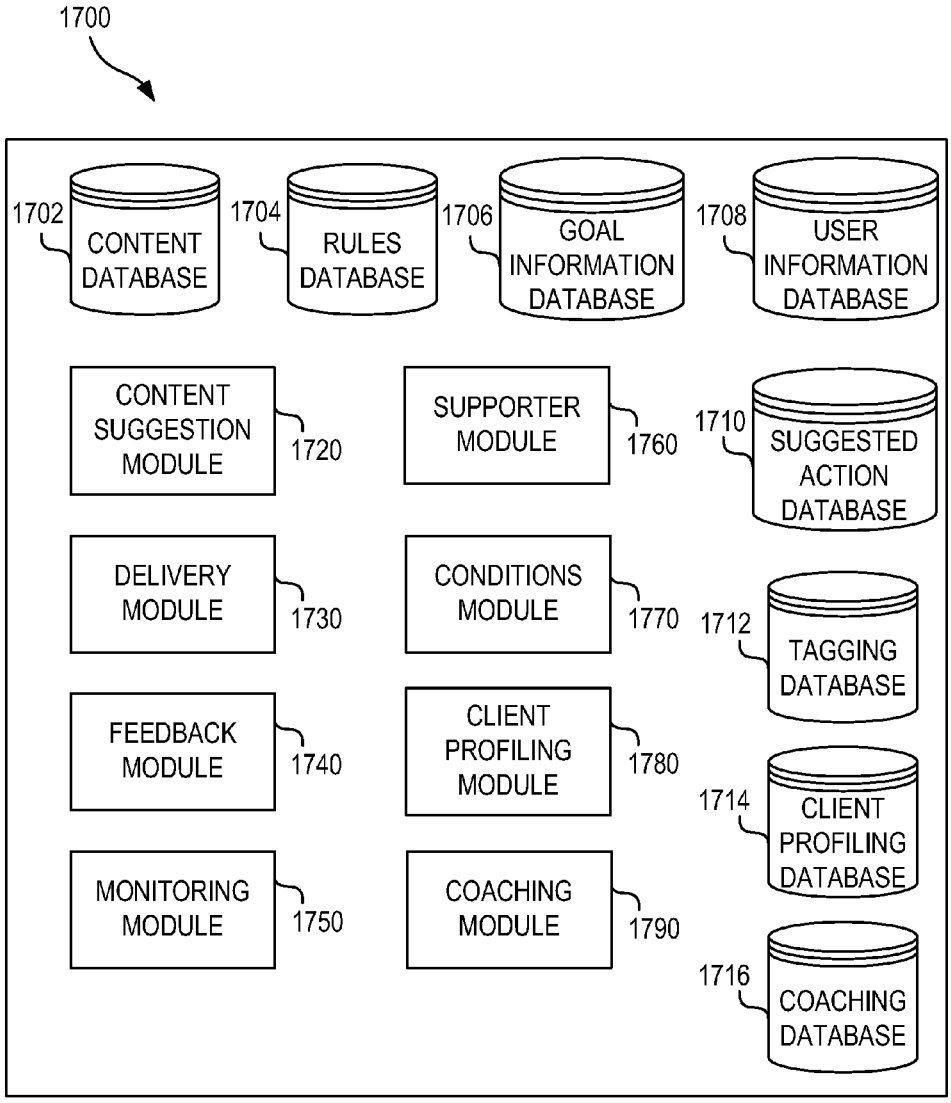

1700
1702
CONTENT DATABASE
1704
RULES DATABASE
1706
GOAL INFORMATION DATABASE
1708
USER INFORMATION DATABASE
CONTENT SUGGESTION MODULE
1720
SUPPORTER MODULE
1760
1710
SUGGESTED ACTION DATABASE
DELIVERY MODULE
1730
CONDITIONS MODULE
1770
1712
TAGGING DATABASE
FEEDBACK MODULE
1740
CLIENT PROFILING MODULE
1780
1714
CLIENT PROFILING DATABASE
MONITORING MODULE
1750
COACHING MODULE
1790
1716
COACHING DATABASE

FIG. 17

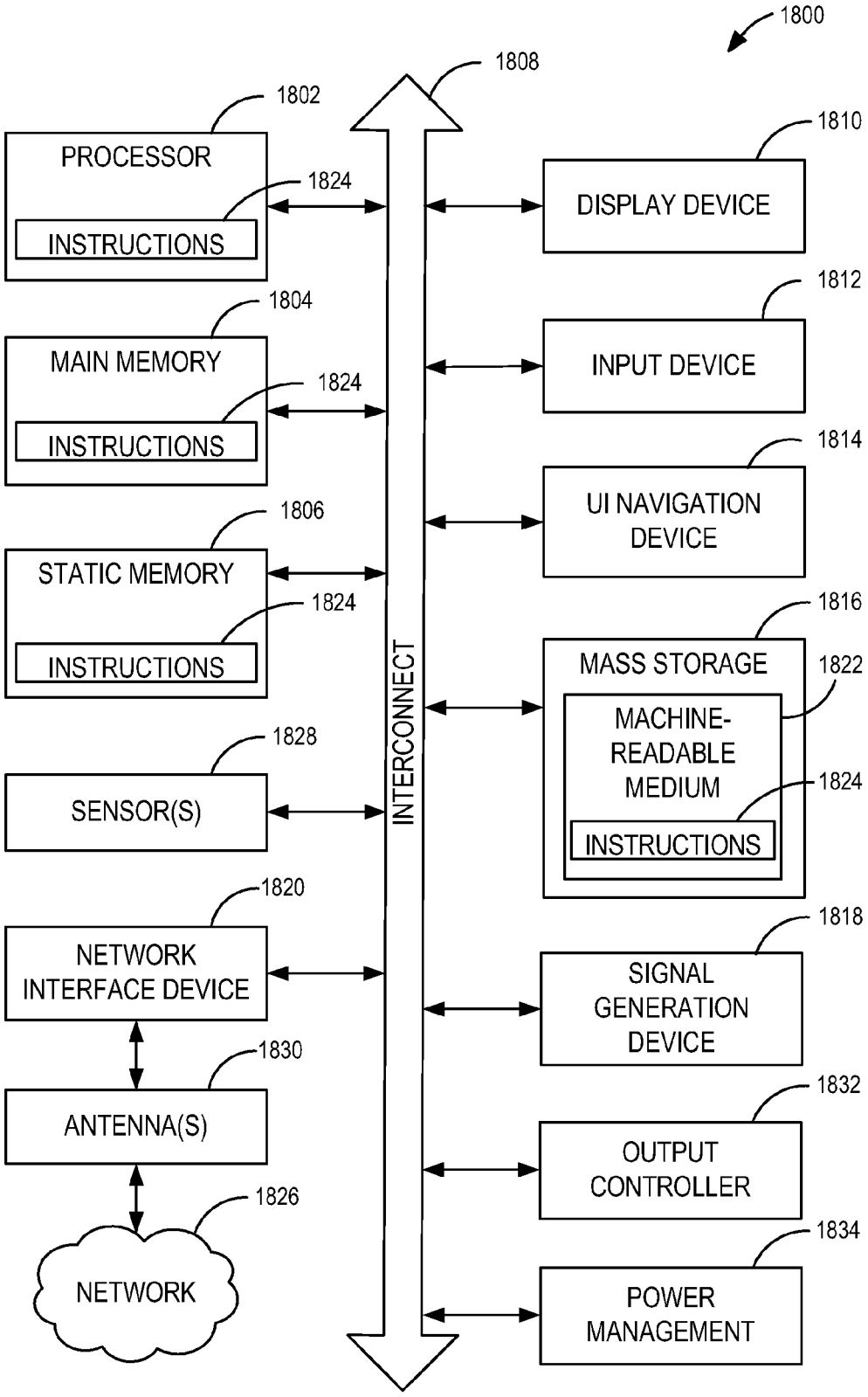

1800
1808
1802
PROCESSOR
1824
INSTRUCTIONS
1804
MAIN MEMORY
1824
INSTRUCTIONS
1806
STATIC MEMORY
1824
INSTRUCTIONS
1828
SENSOR(S)
1820
NETWORK INTERFACE DEVICE
1830
ANTENNA(S)
1826
NETWORK
INTERCONNECT
1810
DISPLAY DEVICE
1812
INPUT DEVICE
1814
UI NAVIGATION DEVICE
1816
MASS STORAGE
1822
MACHINE-READABLE MEDIUM
1824
INSTRUCTIONS
1818
SIGNAL GENERATION DEVICE
1832
OUTPUT CONTROLLER
1834
POWER MANAGEMENT

FIG. 18

EXPERT-BASED CONTENT AND COACHING PLATFORM

CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims the benefit of U.S. Provisional Patent Application Ser. No. 61/732,676, filed Dec. 3, 2012, which is incorporated by reference herein in its entirety. This application is related to pending U.S. patent application Ser. No. 13/772,697, titled "CONTENT SUGGESTION ENGINE," and filed Feb. 21, 2013; and Ser. No. 13/772,405, titled "GOAL-BASED CONTENT SELECTION AND DELIVERY," and filed Feb. 21, 2013; the disclosures of which are incorporated by reference herein in their entireties.

TECHNICAL FIELD

Embodiments pertain to techniques and systems for content selection and management. Some embodiments relate to the use of expert-based content and coaching mechanisms in an information system to select, suggest, recommend, and deliver content to particular human subjects based on an environmental goal or determined conditions of the human subjects.

BACKGROUND

Various data services select or recommend content for display to users. For example, in the self-help setting, existing data services may provide tips, recommendations, and focused content to assist a subject human user with goal-based outcomes such as exercise goals, weight loss, smoking cessation, medical therapy, and the like. Some of these data services provide recommended content to a user in response to user-indicated preferences, user-indicated activity history, or manual user requests for content. Other data services rely on an expert human user to determine which content is most appropriate for delivery to the subject human user to achieve a goal-based outcome.

To the extent that the existing data services provide automated recommendations or selections of content, the timing, delivery, and substance of content from these data services is determined by complex predetermined rules and attributes, or other selections influenced by manual human intervention. For example, recommendations may be hard-coded in a content delivery system to deliver suggestive content at scheduled intervals, or in response to the user's manual indications that a certain accomplishment has or has not been reached. Additionally, intervention from expert human users is time consuming for both the expert human user and the subject human user, and often does not connect the right information from the expert human user to the subject human user with the most valuable content at the most appropriate time.

Existing systems and techniques do not provide real-time recommendations and content selections without extensive programming or human oversight. Further, the workflows involved with existing content delivery systems call for extensive human selection and specification of content, and are not fully automated, responsive, or adaptive to user needs.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. **1** illustrates an information flow diagram of interaction with an example information system and a content suggestion engine according to an example described herein.

FIG. **2**A illustrates an information flow diagram of data operations for factoring activities relevant to an environmental goal according to an example described herein.

FIG. **2**B illustrates an information flow diagram of data operations for factoring activities relevant to a specific physiological goal according to an example described herein.

FIG. **3** illustrates an overview of goal-based workflows integrated with an information system according to an example described herein.

FIG. **4** illustrates a data diagram of member profile information used in connection with expert-based content selection and delivery techniques according to an example described herein.

FIG. **5** illustrates a series of personality assessments captured in member profile information used with expert-based content selection and delivery techniques according to an example described herein.

FIG. **6**A illustrates uses of member profile information and supporter coaching tools in connection with expert-based content selection and delivery techniques according to an example described herein.

FIG. **6**B illustrates data operations occurring in the generation and use of expert-driven content playlists according to an example described herein.

FIG. **7**A illustrates a graphical user interface provided for displaying a content suggestion to a client in an expert-based content workflow according to an example described herein.

FIG. **7**B illustrates a graphical user interface provided for displaying reviews and ratings of a content suggestion in an expert-based content workflow according to an example described herein.

FIG. **7**C illustrates a graphical user interface provided for displaying a content suggestion playlist of content suggestions in an expert-based content workflow according to an example described herein.

FIG. **7**D illustrates a graphical user interface provided for displaying expert-based content suggestions from a plurality of experts in an expert-based content workflow according to an example described herein.

FIG. **7**E illustrates a graphical user interface provided for displaying a content suggestion playlist having varying communication timings in an expert-based content workflow according to an example described herein.

FIG. **7**F illustrates a graphical user interface provided for displaying a content suggestion playlist having varying communication timings in an expert-based content workflow according to an example described herein.

FIG. **8**A illustrates an example of variations of communication timing for communications from an expert in an expert-based content workflow according to an example described herein.

FIG. **8**B illustrates an example illustration of communication timings mapped to user activity, profile information, and real time data elements in an expert-based content workflow according to an example described herein.

FIG. **9**A illustrates an example technique of client interactivity with suggestions from an expert or a content suggestion engine in a content workflow according to an example described herein.

FIG. **9**B illustrates an example technique of delivering suggested actions to and obtaining feedback from a client in a content workflow according to an example described herein.

FIG. **10** illustrates an example technique of processing client interaction with suggested actions of a suggestion playlist in a content workflow according to an example described herein.

FIG. **11** illustrates an example technique of establishing a support agreement between a professional supporter and a client according to an example described herein.

FIG. **12**A illustrates a flowchart depicting a workflow for client and supporter interaction in connection with a client content service interface according to an example described herein.

FIG. **12**B illustrates a flowchart depicting a workflow for client and supporter interaction in connection with a supporter content service interface according to an example described herein.

FIG. **13** illustrates a block diagram of interface components for client and supporter interaction within a content service according to an example described herein.

FIG. **14** illustrates a flowchart of interaction between a client and a supporter in a content workflow according to an example described herein.

FIG. **15** illustrates a flowchart of data functionality and feature components available to a client and a supporter within an information service according to an example described herein.

FIG. **16** illustrates an example method implementing creation and delivery of content to one or more client users from an expert or other coaching source according to an example described herein.

FIG. **17** illustrates an example system configuration of an information system arranged to provide suggested content according to an example described herein.

FIG. **18** illustrates an example of a computer system to implement techniques and system configurations according to an example described herein.

DETAILED DESCRIPTION

The following description and the drawings sufficiently illustrate specific embodiments to enable those skilled in the art to practice them. Other embodiments may incorporate structural, logical, electrical, process, and other changes. Portions and features of some embodiments may be included in, or substituted for, those of other embodiments. Embodiments set forth in the claims encompass all available equivalents of those claims.

The present disclosure illustrates various techniques and configurations to enable a professional user to select and present content from an information system, for individual and multiple human client users. This content is selected to be relevant to goal-based activities of the respective human client users, for example, from a single professional user to coach multiple subject users at the same time to achieve some goal. The interaction techniques and systems described herein enable a professional user to replicate in-person coaching styles, and provide appropriate content to assist achievement of the goal, through related content and suggested actions. The integration of user interfaces and user communication platforms described herein further may facilitate communications using social networks and portable communication mediums, to provide additional availability and delivery of content from a professional user to multiple client users in a variety of settings.

In one example, an internet-hosted information service offers content to client users through a series of dynamically changing user interfaces. For example, widgets hosted in an interactive webpage or software application may be used to collect, display, and deliver relevant and timely communication, suggestions, and content to and from a user. The information service may be used to directly interact and implement aspects of a goal-based workflow with a subject human user, while also facilitating interaction during the goal achievement with other humans or agents, including professional users. Professional users, as used herein refers to persons such as experts, coaches, trained supporters, and other like persons capable of providing advice and direction to address a particular problem or work towards a certain goal.

The following examples describe various scenarios where a subject client user obtains content from a professional user (with such content generally referred to herein as "expert content"). It will be understood that expert content may originate from any number of professional users, including those not having a direct relationship with particular users. However, the model described herein enables a variety of types of professional users to replicate in-person coaching styles, and provide advice, feedback, tailored content, and other variations of coaching assistance to particular users (especially at times when the user is in greatest need of help). For simplicity of reference, the following examples generally refer to a "professional" or "expert" who provides "expert content," but it will be understood that the techniques are not limited to experts or persons with particular recognized expertise. Rather, expert users would include a variety of professional users offering assistance and coaching and expert content would include a variety of types of content from such users.

The following examples of expert-based coaching activities and coaching content may be used to enhance goal-based workflows facilitated by an information system. As further described herein, goal-based workflows may integrate with various evaluations that dynamically assess a user's current state and receptivity to achieving an action or goal. The goal-based workflows may be exposed through a series of user interfaces that involve social aspects and communications, including interaction with a professional user. In addition to professional user assistance and expert content, various circles of personal influence in a connected group (e.g., trusted sets of friends, called "supporters") may be leveraged to keep a user motivated to achieve lifestyle improvements in a fun and inviting manner.

The coaching and supporter interactions may be integrated with features of a social network and social network communications to engage support from friends and professional users. Such supporters may publicly or privately encourage a user to accomplish various activities and achieve goals. A series of scripted or self-generated directives, "destinations," and action playlists may also be used to direct a client onto the path of incremental improvements towards achievement of an ultimate goal. Such goal-based workflows provide numerous opportunities for helpful professional user assistance.

Information System Configuration

The expert-based coaching and content applications described by the present disclosure may be performed in connection with automated receipt, processing, and delivery of relevant content from an electronic information system. The information system, as further described herein, may encourage human interaction with a series of goal-based workflows and goal-based processing activities that deliver relevant content to encourage human activity and progress towards an ultimate goal. Relevant content may be provided in a push or pull manner, on schedule or in response to determined conditions, and manually or automatically from the information system, in accordance with the following techniques.

The computing systems and platforms encompassed by the present disclosure include a mobile or web-based social networking information service, interacting with a suggestion engine, that is used to motivate the human user to change behavior (such as healthy lifestyle choices and activities that

are likely to lead to a positive health outcome) through a persistent intelligent coaching model. The information service may provide intelligent decision making and reinforcement of certain content and content actions, to facilitate encouragement or motivation that increases the likelihood of change in human behavior to achieve the goal. In particular, the information service focuses on encouraging a human user to complete a series of discrete, separate actions or activities (small goals) that in combination will help achieve a larger overall goal. For example, in a weight loss setting, this may include a series of tens, hundreds, or thousands of discrete diet and exercise actions that in combination will help the human user achieve a weight loss goal.

In conjunction with operations of the suggestion engine, the information service may adapt to learn a user's behavior patterns and offer personalized, relevant, or timely suggestions, motivations, or other directed content to help the human user achieve the goal. The information service also may enable peer and professional support for a human user by creating and maintaining human connections relevant to the goal, such as through establishing social networking connections and social networking interactions customized to the goal. As the social network or the behaviors of the human user change, the information service may adapt to alter the actions, motivations, or other directed content to remain relevant, personal, or timely to the human user. In this fashion, the information service is intended to cause behavior changes of the human users, through promotion to achieve the user's goals with social encouragement by friends, family, or supporters, or expert users, in addition to personal motivations reinforced with reminders, or new structures in their living environment, such as may be helpful in altering habits to achieve the goal.

The information service may include various applications and corresponding user interfaces to be viewed by the human user and supporters of the human user to encourage beneficial interactions between the human user and the supporters. These interactions, which may be driven by suggested content and suggested content delivery types or timings, are used to cause activities that lead to the intended behavior change(s) in a human user. Accordingly, the content suggestion engine acts in a larger environment of an "intelligent" information system that provides appropriate messages and content selections to the human user and supporters at the right time.

FIG. **1** illustrates an information flow diagram of interaction with an example information system **100** configured for providing content (e.g., motivations, recommendations, suggestions, facts, or other relevant material) to human users. The information system **100** may include a suggestion engine **102**, participation from a supporter network **104** of various human or automated users (including expert and other professional users), and participation from a subject human user (further referred to herein as a "client") **106**, with the information system **100** supporting a plurality of client users.

The suggestion engine **102** may be configured to make decisions to deliver relevant content dynamically (e.g., at the proper time, in the proper context, and with the proper communication medium) using data conditions **108** maintained for the client **106**. The data conditions **108** maintained for the client **106** may include information such as: one or more goals of the client **106**; demographic information such as gender, age, and familial information; medical information such as medical conditions, medical history, and medical or physical restrictions; a psychological profile and other psychological information such as personality type, daily routines or habits, emotional status, likes and dislikes; and available external devices (e.g., smart phone or smart phone applications, smart weight scales, smart TV, video game systems, etc.); client-desired coaching programs and models (e.g., diet style, exercise focus, or mental health); information relevant to discrete activities, such as present or scheduled locations of the client **106**, and time to accomplish activities; information relevant to the goal, such as time to achieve the goal, difficulty of achieving the goal; and like information for conditions relevant to the human user, supporters of the human user, or the overall goal.

The specific content selection operations of the suggestion engine **102** are directed to change the behavior of the client **106**, such as to help the client **106** achieve a defined or derived goal with a series of content messages that invoke action by suggested activities and events. Delivery of the content may be provided directly from the suggestion engine **102** to the client **106** with a content delivery flow **110**. With the content delivery flow **110**, the suggestion engine **102** may query the client **106**, such as by periodically or randomly querying, to gain information and feedback that may affect what content is delivered to the client **106**. Responses by the client **106** may be provided back to the content suggestion engine **102** through a content feedback flow **112** to indicate the results of such querying or feedback.

The suggestion engine **102** may also provide indirect content delivery flows **114**, **116** through a supporter network **104**, to enable the supporter network **104** to provide content to the client **106** at appropriate times. Specifically, the suggestion engine **102** may indirectly provide content selections to the client **106** using indirect content delivery flow **114**, and orchestrate resources of the supporter network **104** by engaging influential persons (e.g., family, friends, experts, other professional users that influence the client **106**) to forward or deliver the content.

The supporter network **104** may also facilitate interaction from professional users such as healthcare providers, nutritionists, personal trainers, psychologists, or behavior coaches. Such interaction from professional users in the supporter network **104** may be used to proactively guide personalized and critically timed suggestions (e.g., such as by sending a message to the client **106** that encourages a specific activity), or persistently offer coaching, guiding, motivating, or focusing actions and content for encouraging the client **106** to complete actions to achieve or make progress on the goal.

Additionally, members of the supporter network **104** may generate and provide suggestions back to the suggestion engine **102**, directly or with crowdsourcing-type mechanisms distributed among a plurality of persons. For example, a supporter may directly author suggestions that are sent to the human user, or edit, modify, or unify suggestions with slight modifications for user with human users. Based on the effectiveness of the content created by the supporter network **104**, a pool of suggestions may be created.

Thus, the supporter network **104** may be used to generate or forward content selected by the suggestion engine **102**, using indirect content delivery flow **116**. For example, the suggestion engine **102** may provide a supporter of the supporter network **104** with pre-formatted action content that may be sent directly from the supporter to the client **106** using a recognized communication medium, such as by forwarding and customizing a text message, an email message, a social network message, and the like. Suggestions directly received from members of the supporter network **104** are more likely to reduce bathers or excuses and empower the client **106** to take action that will help achieve their goals. Feedback may also be provided back to members of the supporter network **104** from the client **106** (such as a confirmation that the client **106** performed the activity, a message that the client **106**

enjoyed the suggestion, a message asking for support to perform the activity, and the like).

The suggestion engine **102** may communicate with the supporter network **104** and the client **106**, such as to obtain information about the client **106** or provide messages to the client **106** or to the supporter network **104**. The supporter network **104** may personalize the message and send it to the client **106**, such as shown in FIG. **1**. By having the client **106** receive the message from the supporter network **104** the message may have more impact, and potentially be more motivating, than if it came directly from the suggestion engine **102**.

Suggestion Content Types and Delivery

Appropriate messages, multimedia, and other content delivered to the client **106** from or on behalf of the information system **100** are referred to herein as "suggestion content," as may be selected and produced by the content suggestion engine **102**. Suggestion content may include content from one or more messages that the client **106** and supporter network **104** receive that are collectively intended to cause human attention and cause the client **106** to perform some action. The suggestion content may be tailored and customized to be appropriate to the client **106**, time, and individual intended actions. The suggestion content may include a variety of formats, such as content that indicates greetings, actions, motivations, prompts, reminders, and rewards. Further, the suggestion content may be delivered and interacted with according to particular goal-based workflows or rule sets.

As used herein, suggestion content may include content delivered to the client **106** intended to cause an action related to an ultimate goal. Suggested action content sent to the client **106**, may be constructed from content that includes an action statement, and a pre statement or a post statement.

As used herein, motivational content is a specific subset of suggestion content that is intended to improve the likelihood of the client **106** performing a suggested action by appealing to some human interest. Motivational content may be embodied by: various prompts that include a request of the client **106** or supporter network **104** for a response; reminders that include a statement that reminds the client **106** or a supporter from the supporter network **104** that an action on their part is due; rewards that include statements provided to the client **106** or supporter that are congratulatory or explain something being given to the client **106** or supporter; supporter messages that include content specifically intended for the supporter.

Content provided by the information system **100** may be stored and maintained in structured and unstructured form. Unstructured content may include suggestion content not yet edited, tagged, or final reviewed; whereas structured content may include content that has been edited, tagged, and reviewed, and is ready for use by the suggestion engine **102** (as further illustrated with reference below to FIGS. **2**A and **2**B).

Content may be tagged for use in defined retrieval operations. Such tagging may include a psychological assessment matching. A client **106** may be asked to take assessments for engagement, receptivity, or social style. The content may be tagged in such a way that the information system **100** matches the client **106** with the style of the content suited for them. This may "personalize" the interactions between the information system **100** and the client **106**, such as to provide a more effective or engaging environment. The information system **100** may provide content for each of eating, movement (e.g., actions to physically accomplish), and self-view. The tags may provide this information.

The tagging of data may include "behavior change" tagging. A current behavior change theory promotes a combination of "sources of behavior change" that promote a higher probability of changing people's behavior. These sources of behavior change include items that improve an individual's intrinsic/extrinsic motivation and aptitude, group factors and power to cause behavior change, and environmental factors and power to cause behavior change. Presenting suggestions that fit in multiple behavior change areas may be more effective than presenting suggestions in just one or a few of the areas. Additionally, the client **106** may fill out a lifestyle questionnaire, which determines, such as by using Boolean logic, different "problems" that the client **106** may have. Content may be tagged with these problems, such as to tag content that relates to the problem. The client **106** may work on the problem by choosing specific suggestions or playlists tagged with that problem.

In one example use of a suggestion engine **102**, the client **106** is the person that the information system **100** is intended to help; the supporter network **104** may include one of the persons providing aid to the client **106**—this person could be a team member, friend, family member, or a professional user/other expert such as personal trainer. Thus, overall users of the suggestion engine **102** may include any person using the information service (and accompanying applications, websites, and services), including the client **106**, supporters in the supporter network **104**, an administrator, and the like.

The information system **100** facilitates interaction with the client **106** and supporters in the supporter network **104**, such as encouraging clients and supporters to interact in the social network, to accompany several types of content. Content may be created that gives clients and supporters specific actions to do, and this content may be delivered in a way that encourages the supporter or client **106** to do the action. The content may be designed to be delivered to the client **106** either directly or through the supporter. A plurality of action statements providing respective suggested actions may be presented to the client **106** for participation. Other types of content may be used to increase the probability of the client **106** performing the suggested actions.

FIG. **2**A illustrates an information flow diagram of an example of data operations **200** of the suggestion engine **102**. Data **208**A and **208**B, illustrated as various inputs, may be provided in a structured format. Structured data in one example is unstructured data that has undergone a formalization, structuring, categorization, and tagging process in the information system **100** illustrated in FIG. **1**. The data operations **200** serve to map data **208**A to a personality or behavior type **210** or characteristic of a human user such as the client **106**, and an ecosystem of conditions **212** is factored to produce appropriate data **208**B that addresses one or more environmental goals **204**.

Data input for operations **200** of the suggestion engine **102** may originate from a variety of data sets and data types, but not all data types and data inputs may impact a human subject to attain a particular goal at a particular time. Data **208**A may be provided from client personal data, such as location, the psychological state, lifestyle, occupation, relationship status, or coaching style, among others, collected or determined for the client **106**. A client's behavior type **210**, such as caregiver, colleague, competitor, authoritarian, optimist, skeptic, fatalist, activist, driver, analytical, amiable, expressive, or combinations thereof, may be inferred or otherwise determined from the data **208**A (and changed or adapted as appropriate using contextual user information **218** or data **208**B).

An ecosystem of conditions **212**, including barriers **214** to and incentives **216** for achieving the one or more environmental goals **204** may be determined. The ecosystem of conditions **212** generally reflects information items that the infor-

mation system **100** is aware of, and relevant factors to achieve success. This may include data such as the time of day, client location, medical records of the client **106**, and like information or conditions that affect the client **106**.

Barriers **214** considered with the ecosystem of conditions **212** may include the client **106** having a physical ailment, such as a bad knee or asthma, not having a phone, not having supporters, does not like working out, cannot afford the services, having a busy schedule, medical conditions (such as allergies or taking medications), among others. Incentives **216** considered with the ecosystem of conditions **212** may include things that the client **106** likes (e.g., brand name shoes or specific music), peer pressure, a good feeling gained from performing some activity (e.g., working out), a discount on goods or services provided, or an upcoming event (e.g., a half marathon). The data **208**A, **208**B and the ecosystem of conditions **212** may be determined through obtaining answers to questions, such as through answers to episodic questions posed to the client **106** (the episodic questions resulting at determined times, places, or contexts). The ecosystem of conditions **212** further may provide contextual user information **218** to provide additional data to help interpret or understand the barriers **214**, incentives **216**, or the data **208**A, **208**B.

The data **208**B may be directly or indirectly related to the one or more environmental goals **204**. The data **208**B may include a reward for achieving the goal(s) **204** (e.g., kudos), a type of diet to be followed, a reason for wanting to achieve the goal, or a date to achieve the goal by, among others. The environmental goal(s) **204** may include physical activity goals, such as to lose a certain amount of weight, change a habit, such as to quit smoking, biting fingernails, workout a specific number of times in a period of time, or to achieve a physical challenge such as running a marathon or climbing a mountain, among others.

The one or more environmental goals **204** are not necessarily limited to a central, ultimate goal (such as losing weight, or stopping smoking), but may include a number of subordinate or associated goals (such as developing healthy habits, a positive self-image, or confidence or enjoyment of the goal-reaching process) that help achieve the ultimate goal in a positive fashion. Thus, the environmental goals **204** may be broader than a single goal and may include a number of additive, complimentary, or interrelated actions and results that produce beneficial outcomes and experiences for the client **106**.

Different humans have preferred ways of being talked to and interacted with. The information system **100** may facilitate the client **106** taking several questionnaires that show these preferences. A personality style may be inferred or determined from answers to questions in the questionnaires. The personality styles may indicate a client's receptivity (e.g., the preference for a certain tone of message); engagement (e.g., a bias towards immediate action versus thoughtful consideration when presented with a challenge to change); or social style (e.g., an intersection of assertiveness and responsiveness). The content may be designed to fulfill all these preferences.

FIG. **2**B provides an illustration of an information flow diagram of an example of data operations **202** of the suggestion engine **102** applied to a specific weight loss goal **204** (e.g., to lose 10 kilograms in two weeks). In particular, the data operations **202** illustrate the association of specific data points **208**A with the client **106** and the client's behavior type **210**, the association of specific data points **208**B with a specific goal **204**, and the provision of an ecosystem of conditions **212** that affect the client **106**.

As illustrated in FIG. **2**B, some of the specific data points **208**A associated with the client **106** and the client's behavior type **210** might include data related to: the client's location; the client's preferred coaching style; the client's current or historical psychological state; the client's lifestyle; the client's occupation; or the client's relationship status. As shown, the client's behavior type **210** is classified as "competitive", which may serve to filter or weight usage for some of the data points **208**A.

As also illustrated in FIG. **2**B, some of the conditions that affect the client **106** include various barriers, incentives, and contextual information data points. The data points relevant to the client **106** may include barriers such as physical limitations; limitations on supporter (including professional user) involvement; limited finances; or limited time involvement. The data points relevant to the client **106** may also include incentives such as peer pressure; financial incentives; multimedia (e.g., a favorite song); and events and enjoyable activities. The data points relevant to the client **106** may also be contextual user information **218** such as exercise data (such as data provided from physiological monitoring device); medical data (such as provided from a medical device, a psychological monitoring device, or medical records); and communication preferences (to accomplish more effective communications). Each of these conditions may provide further classifications and conditions. For example, communication preferences may be established not just for the type of communications, but also for the particular sender (because some clients may be more receptive to communications from particular people).

As also illustrated in FIG. **2**B, some of the specific data points associated with the specific weight loss goal **204** might include data related to: the ultimate goal; reward status or reward history; recommended activities and history of progress toward recommended activities; recommended diet and history of progress toward recommended diet; motivating reason(s); and timeliness such as the date that the goal expires.

The content and goal-based workflows delivered from the information system **100** may not only be customized to the specific goal or the ultimate goal, but may also be customized to the personality style, barriers, incentives, contextual information, behavior type, and preferences of the client **106**. Each of the various data values maintained in the ecosystem of conditions **212** and the data points **208**A, **208**B may serve to direct the content, timing, availability, and communication methods of the goal-based workflows and workflow results.

Series-Based Goal Actions

FIG. **3** provides an illustration of a framework **300** for a series of integrated goal-based workflows according to examples described herein. Within the framework **300** a user can help oneself (operation **302**), help others within the system (operation **304**), or can help others outside the system—help the world (operation **306**). These and other aspects of the user's activity may also be affected by outside/external influences (operation **308**).

Helping oneself may include creating a story (operation **310**), adding supporters (operation **312**), and receiving suggestions (operation **314**) from other users, such as supporters. Creating a story (operation **310**) may include indicating or otherwise providing personal information (data **316**). Personal information (data **316**) may include likes and dislikes, demographic information, medical conditions, goals, lifestyle, or a psychological profile, among others. Helping others may include selecting a suggestion (operation **318**), adding a message to the suggestion (operation **320**), and sending the suggestion to the user (operation **322**). The sug-

gestion can be an encouraging message or some other form or personalizing the suggestion to the user.

Helping the world may include a user completing a suggestion (operation **324**), earning kudos (operation **326**) (a reward currency) for completing the suggestion, and donating the kudos (operation **328**) to a charity or other altruistic destination. The interaction between the user activity (such as helping oneself (operation **302**)) and the receipt of external influences (operation **308**) may include various suggestions generated or delivered by one or more third parties (operation **330**), including professional users, and the one or more third parties providing feedback (operation **332**), content, or other input to improve operation of the information system **100**.

Coaching Platform Features

The information system **100** may be adapted to include functionality that enables a professional user (e.g., an expert) to provide content to subject users, individually and as appropriate groups. The ability to contact multiple subject users from a single interaction may enable a professional user to manage a larger number of clients while maintaining personal attention. For example, an expert user may wish contact multiple subject users at the same time with a common message, such as to wake up all of their clients with a prompt "Time to get out of bed. How are you feeling today?" The data collected from this interaction may guide special attention needed for specific clients during that day.

The coaching functions in the information system **100** enable direct one-on-one and one-to-many coaching interactions without requiring a physical presence from the professional supporter. The specific content interactions provided through use of the information system **100** can be used to motivate the individual clients to stay on task while facilitating incremental revenue opportunities for the professional user.

Features provided from coaching and expert advice mechanisms and operations in the information system **100** may include, but are not limited to:

- A one-to-many service platform, so a member base is scalable, while providing communications to large numbers of members.
- Providing access to specific groups of members, that may be may be filtered by profile types, various afflictions, and special needs.
- Customized pricing and bundling of services to users of various conditions, based on the client's desired interactions. For example, different prices may be offered for the professional user's offering of: content bundles, playlists, and programs, in-person meetings, or support and coaching through internet and web-based platforms.
- Creation and management of referrals and referral incentives, such as a referral list of in-bound sales leads for members, and passes for referrals and user recommendations (e.g., earn a free month of support if you invite three friends to join you).
- Creation and management of trigger logic for in-person meetings or other personal attention (e.g., to identify when the client has a bad day, or didn't complete a certain number of suggestions in a row) to generate incremental revenue. Further, the trigger logic can be used to supplement real-world meetings and coaching activities, and used to evaluate results from the real-world meeting.
- Creation and management of a professional profile for the professional user, such as a biography, publications, postings, reviews, prices, offerings, expertise, certifications, and the like. Likewise, the professional profile may offer access to an encompassing and consumable member profile which allows the professional user to modify features of his or her coaching style, intensity, and direction.
- Management of billing and collections from the client to facilitate payments to the professional user. For example, various incentive offers and payment options such as free trials and modifiable payment tiers and cycles may be offered and managed by the professional user.
- Suggestions, ideas, and guidance for how to effectively coach, probe, and contact the user through web and mobile platforms or other interactions with the information system. This may include offering feedback on the professional user's coaching activities (from automated techniques or from other professional users and mentors).
- Use of multiple communication mediums, such as web, text, smartphone, to motivate, push, prod, and coach a client towards his or her personalized goal with relevant communications. The communications may be integrated with an integration or visualization of real-time data from a client's personal hardware monitoring devices to verify response to the communications.
- Around-the-clock contact and data stream from clients and data services, including mobile access to client progress and billing functions.
- Advertisement and promotions. For example, a professional user may become a featured professional of the week/month/year—featuring an individual or group of professionals as a featured provider on a web or mobile service.

These and other relevant coaching functions enable interactions from a professional user with a variety of members to achieve positive results towards goals and activities. For example, in a healthcare coaching scenario, such coaching functions enables healthcare professionals or health/fitness coaches to motivate, support, monitor, and coach the client **106** to make appropriate lifestyle changes, towards a goal such as stopping smoking, losing weight, controlling diabetes, recovering from a cancer diagnosis, and the like.

The information system **100** may collect data from a variety of client hardware monitoring devices that monitor the client activity, for processing, integration, and repackaging of such data for use by the professional user. The information system may provide the professional user to allow the professional user to generate enhanced motivation and support responses and content, to encourage the client to stay on task in attaining goals.

The information system **100** may also provide clients with the ability to rate and review professional users, to provide feedback and input on suggestions and content that is helpful or unhelpful. In addition, the information system **100** may provide the professional users with useful statistics and indications of user responses to particular suggested content or actions by the professional user.

The information system **100** may also provide clients with the ability to find, sort, and purchase services from the professional users, based on the client's profile, need, location, or other criterion. The information system **100** may also provide the ability to match the client to a particular professional user on demand or in response to a determined condition. For example, a user may choose identify a professional user from a listing of available professional users, sorting the listing of professional users by performance results (integrity rating, member reviews), and specific service offerings (such as exercise, nutrition, psychology, diabetes management, and the like).

The information system **100** may also provide members with the ability to utilize multiple communication mediums with skilled and knowledgeable professional users such as healthcare professionals and/or health coaches. This can enable a healthcare professional or health coach to provide advice to hundreds or thousands of clients on a scheduled or as-needed basis.

Coaching Based on Member Profiles

The information system **100** may provide a consumable, encompassing profile for client users, utilizing real-time elements to customize the user experience and content provided. For example, content may be provided to a specific client based on an indication of how the client is feeling today, the weather at the client's location, the GPS location of the client, and others).

Such profile information may also be utilized by a professional user to customize content and make professional evaluations relevant to the client user. By making the data consumable to the professional user (and other users such as an expert supporter), the professional supporter can make accurate and tailored decisions on how to effectively coach the individual.

FIG. **4** illustrates a data diagram of member profile information **400** for a client user that may be used in connection with expert-based content selection and delivery techniques according to one example. For example, the member profile information **400** may be provided to a professional user or used within operations of an information system, such as the information system **100**. The data values included and maintained in the member profile information **400** for a client user, such as client **106**, may include:

Demographic information **402**. This may include, for example, age, location, ethnicity, education level, income of the client **106**.

Goal information **404**. This may include information related to the specific goal(s) set or determined for the client **106**, and progress on the goal(s) as determined by the information system **100**.

Supporter information **406**. This may include, for example, the number of supporters, level of support and integrity from friends, family, co-workers, and other professional supporters, other subscriptions, and like information.

Activity Information **408**. This may include information on lifestyle and relevant activities of the client **106**, such as information to identify a stay at home mother of three, versus a business woman spending a large amount of time traveling.

Restriction information **410**. This may include information on personal restrictions of the client **106** such as food allergies, injuries, physical limitations, and the like.

Preference information **412**. This may include a preferred cuisine(s) or diet styles (e.g. low carb, low calorie, vegan, etc.), or preferred exercise types based on seasons, equipment access and gym membership.

Personality information **414**. This may include information related to personality type and preferred communication style, and data obtained from personality assessments.

Physiological and Medical Condition information **416**. This may include information on other physical or psychological conditions of the client **106** (such as diabetes, smoking, cardiovascular rehab, depression, and the like).

Communication preference information **418**. This may include information on the communication medium preferences or privacy settings for the client **106**.

Timing and Scheduling Information **420**. This may include information on relevant times and schedules where particular content or activities would be most relevant (or not needed) by the client **106** (for example, information indicating that the client works night shifts as a nurse, rather than a standard daytime office job).

Environment Information **422**. This may include information on the user's locale, physical environment home environment, work environment, and factors that may make it harder or easier to accomplish a certain goal.

Device/Tracking Information **424**. This may include information collected from medical, exercise, or tracking devices, which provides data that that can be useful for monitoring or coaching purposes.

Archived Information **426** and Current Information **428** data sets. Archived Information **426** may be used to archive or store previous states of the various information fields, such as what was the client's mood or state at a past point in time. Current Information **428** may provide a current data set of the state of the information fields, such as the user's current mood or receptivity to certain activities. Thus, the Current Information **428** is configured to be dynamic and change over time, in response to the client **106**.

The information system may be configured to utilize the member profile information **400** to control relevant content and content deliveries provided by the professional user. For example, the information system **100** may alert both the client **106** and the professional user to problematic conditions, triggered when the user did not perform some action, a time expires, or the like. Further, a detected medical scenario such as an eating disorder, depression, or the like may alert the client **106** to visit a doctor or seek medical assistance. Under certain circumstances, the coaching and the professional user's assistance will not address the issue, so the information system can prompt the member to opt from the coaching services and seek medical assistance.

Within various user interfaces, progress tracking for the client **106** may be provided. Interfaces may also allow a particular client **106** to share their profile, progress, and goals with their supporters so proactive coaching can be enabled. The professional user may have access to some or all of this information, to inform the professional user what the client **106** is telling to others and is experiencing.

Coaching techniques may be implemented in any number of automated fashions by the information system **100**, as a result of behavior signatures (e.g., detected user behavior) where proactive action is needed. For example, a detected behavior may occur when a goal (e.g., a "destination") is not met, a suggestion is uncompleted, there is a lack of communication or lack of friend support between a client and a user, or when other areas of inactivity and prompting are detected in the information system.

A personality profile stored in the personality information **414** may provide additional, granular information based on a psychological assessment. The personality information **414** may be used to provide the professional user with an overall assessment of the client **106**, to provide guidance of how to coach the client **106** through a lifestyle change.

FIG. **5** illustrates an example series of personality assessments captured in member profile information (e.g., member profile information **400**), featuring example personality information **414** for use in expert-based content selection and coaching. FIG. **5** specifically illustrates a charting of personality profiles **502**, **504**, **506** produced from one or more psychological assessments, providing an example consumable personality assessment that can be used by the professional user to effectively coach a client user.

FIG. **5** also illustrates a comparison between different assessments. For example, a social style profile **502** may chart a client at one quadrant in a personality assessment graph,

whereas a receptivity score profile **504** and an engagement style profile **506** may chart a client at different quadrants in the personality assessment graph. The example personality profile (e.g., maintained in personality information **414**) shows that the evaluated client tends to be slightly amiable (nice, easy to get along with), would prefer a slightly more sensitive coaching style (caregiver), and is very able/willing to make changes in her life (optimist, planner). Such information would be useful to a professional user in crafting specific messages relating to changing behaviors, without offering the messages that push the client too far, too fast.

Workflows and Playlists for Providing Professional User Content

The workflows and goals performed in connection with the information system **100** may be implemented with specific strategies and accomplishments to be Specific, Measurable, Attainable, Relevant/Realistic, and Time-bound. As used herein, the "overall goal" may be an environmental goal or result that may be achieved through performance of the strategies or accomplishments by the client **106**. The overall goal may be further divided or segmented into time-based or activity-based goals, such as a series of short term goals, intermediate goals, and long term goals.

The client **106** may set the overall goal (within appropriate conditions and business rules), while the information system **100** may provide smaller goals to measure progress towards the overall goal. The overall goal may be a more abstract concept (e.g., "feel better, be healthier, and lose weight") while the time- or activity-based goal may be more specific and quantifiable. Specifically, the time- or activity-based goal may be quantifiable in order to reach some measurable health goal such as: an amount of weight or body measurement lost; a reduction in smoking a number of cigarettes; a self-measurement on a scale of 1 to 10; an assessment by a medical professional; and the like.

The time- or activity-based goal may be provided with a start and end date. When a goal is met, and another is chosen, the start date (by default) may be established from the end date of the previous goal. In some examples, a client **106** may change the start date. Business rules may be established for achieving the time or activity-based goal within a period of time. For example, in a weight loss setting, if the amount of weight that can be lost in a healthy manner in a given timeframe (such as a maximum of 5 kilograms per week) exceeds the "healthy" rate, the client **106** may be prompted to either push back the end-date or reduce the amount of weight to be lost. Business rules may also be applied to automatically adjust and change the goal as appropriate.

In some examples, the client **106** may set the long-term goal, and the information system **100** responds by providing short-term and intermediate goals to measure progress, and establishing satisfaction of the long-term goal from the short-term and intermediate goals. The short-term and intermediate goals may be provided through use of suggested action and suggested action messages, with the performance of the various suggested actions resulting in an increment of progress towards the ultimate goal. The suggested action and goals are therefore structured to allow specific, quantifiable measurements and results (such as success or failure).

Individual suggestions and suggested actions may be linked together to create playlists or programs. For example, as a comparison to a chemistry-like composition, just as atoms are organized together to create molecules and molecules strung together to create large structures with a specific purpose, individual suggestions and playlists of suggestions combine to create programs with a unique purpose and flavor.

A playlist is a set of suggested actions (each suggested action being introduced to the user through suggested content) that may be presented to the client **106** as a single "set of suggested actions", individually or as part of a short-term goal, intermediate goal, or long-term goal. Providing a playlist can make user actions to choose or select actions less frequent, and provide a short term context for the client **106**. The client **106** may want repetition, variety, to concentrate on a particular area, to see progress in a particular area, or to be generally healthy. Playlists may be designed to link suggested actions together to create a coordinated effort that may consider the desires of the client **106**.

The playlist may be chosen as a specific item by the client **106**. The playlist may include suggested actions over a period of time, such as a day, week, ten days, months, quarter, year, etc. The client **106** may wish to choose a (somewhat) coordinated effort that is longer than a single action. For example, making sure they eat a healthy breakfast for one week. The playlist feature may allow the client **106** to choose this as a single item. Each suggested action in the playlist may be set for specific times as designated in the playlist (e.g., every x period).

A playlist may be linked as part of a larger program. A program can be: 1) a designation of a specific type of suggested action by keywords (e.g., Mayo Clinic diet, weight watchers diet, etc.), where the suggestion engine **102** preferentially chooses actions or playlists to present to the client **106** as a function of the keywords; or 2) a set of playlists presented in a series, such as a series that has a defined objective (for example, eat a good breakfast for four (4) weeks, which may include suggested actions for both purchasing the materials for a good breakfast, such as oatmeal, as well as allowing enough time to eat it before starting the day's other activities).

Professional User Coaching Tools

The information system **100** may provide various features and functions to assist data collection and content delivery. This may provide a professional user with the ability to control multiple aspects of the goal-based workflow and goal-based interactions, including when particular content is delivered to a client, and the defined triggers to provide such content. The professional user may also utilize the information system **100** to provide communications over a variety of mediums, enabling the professional user to chat, send images, send videos, monitor the member, and provide suggestions (including through multimedia, URLs, timing components, and the like).

FIG. **6**A provides an illustration of member profile information and supporter coaching tools **600** used in connection with expert-based content selection and delivery techniques of the information system **100**. As shown, a professional supporter **104**A (a coach, expert, or other professional user) accesses a client profile of the information system (e.g., member profile information **400**) to utilize various tools and functions (for example, to convey information and activities towards the client user, the client **106**).

In a first example, the information system may utilize information in the client profile to provide tracking, monitoring, and automated follow-up on suggestions **602** for delivery to the client **106**. The tracking operations may be provided through interface to other technologies, and data integration with various software applications and hardware devices **610**. One example hardware device is an exercise tracking device **612** configured to track daily activity (e.g., tracking a client user's walk using an accelerometer, pedometer, GPS, and the like). The client user's GPS location **614** may provide further information on the habits of the client user and the client

user's habits, likes, and amount of activity. In other examples, the data integration may occur through a customized app running on the client user's smartphone (e.g., mobile device **636**). Other tracking devices **634** including medical devices may be used to collect and provide relevant tracking and monitoring data.

In a second example, the information system may utilize information in the client profile **400** to provide suggestions and playlists **604** to the client **106**. This may be provided by pushing suggestions through other supporters, attempting to leverage other relationships to communicate information through the client user's existing supporter relationships. For example, custom playlists **616** may be established to provide custom information from the professional supporter **104**A to the client. The client may provide feedback and compliance information back to the professional supporter **104**A through the use of playlist feedback **618**. This interaction may be provided through the communication mediums described herein, for example, the mobile device **636**.

The suggestions and playlists **604** may be integrated with various prompts, reminders, and motivators **620** to deliver the content to the client **106**. For example, custom playlists **616** may include of suggestions that are triggered by logic based on various inputs including the custom assessments **622** and the goal setting **624**. The prompts, reminders, and motivators **620** may be associated with custom responses defined by the professional supporter **104**A, including specific actions to respond to user behavior. For example, a professional supporter **104**A may "blow the whistle," "yell," "coach one-on-one," "publicly embarrass," or perform like actions to provide motivation to the client **106**.

In a third example, the information system may provide mechanisms to manage goals, logic triggers, and like conditions related to use of the goals. For example, the custom assessments **622** may provide questionnaires to determine the current state of the client user. These mechanisms may also be integrated with goal setting **624** (which may be referred to as a "Destination") and automated tracking of the client user's progress towards the goal.

In a fourth example, the information system may provide various communication mediums **608** to facilitate communication between the professional supporter **104**A and the client **106**. These may include SMS **632**, chat **630**, email **628**, calendar integration **626** (e.g., to schedule in-person meeting and integrate to other calendar services), phone communications, or communications through interfaces to the Information System **100**. In addition, communication may include prompts (providing a two-way communication eliciting response from the user) or a "sales representative"-type call for inquiries on the status of the client user.

The supporter coaching tools **600** may be used to provide a professional user such as the professional supporter **104**A with access to scalable client base in need of their expertise. A professional supporter **104**A may choose to build teams of clients that they are suited to help, and send playlists to clusters of networks, rather than reaching out to individual clients. In addition, the professional supporter **104**A may be able to provide similar or the same content playlists to groups of clients, receiving ratings and feedback to determine which users are most receptive to the coaching and content.

FIG. **6**B provides an illustration of data operations **650** occurring in the generation and use of expert-driven content playlists in the information system **100** according to one example. The playlist may be created from one or a combination of suggested content **652** originating from the information system **100**, or expert-based content **654** originating from the professional user (e.g., professional supporter **104**A). The suggested content **652** may also include components of crowd-sourced content such as member-provided or group-provided content. The information system **100** may prompt, suggest, or encourage the generation of the expert-based content, and allow the expert to change portions of the suggested content.

Upon the definition of the content, the professional supporter may apply his or her coaching style through the use of templates and various tools. These include having the expert choosing to add multimedia components (operation **656**). Suggestions may contain one or more of the following, for combination into a playlist for the member: Videos; Music (e.g., MP3) files; Picture files; Animated picture files; Coaching voiceover and integration to music libraries and services; Quotes; Event invitations; Textual Content; or External URL content.

The content may be refined further by applying one or more content styles (operation **658**). The applied styles may include aspects of (or be chosen based on): profile types, geographic location, culture, or environment, as some example.

The content may be refined further by applying suggestion queuing and decision tree logic (operation **660**). Such logic may provide the ability to: change a variable countdown timer used for delivery or use of content; change duration, difficulty, and frequency of suggestions (intensity); provide reminders, motivators, and prompts based on trigger logic; and maintain a content audit trail for verification.

The content may be refined further by applying sourcing and ranking (operation **662**). The sourcing and ranking may provide the ability to add and cite information sources such as: clinical pathways; dietary programs; exercise regimes; or other affliction-specific content.

The content may be refined further by applying branding (operation **664**). Branding capabilities provide the ability for a professional user to add: a logo; background signature sound; biography; listing of publications or books; or otherwise provide the ability to post specific content to users.

The delivery styles and timing of the content may also be changed or defined (operation **666**). Professional users can use all feature controls of specific mobile devices (e.g., iOS versus Android, utilizing features such as speakers, sound, flash, vibrate) with the delivery of content. Other examples for use by a professional user may include: sending a SMS message in all-capitalized letters; vibrating the phone and using a camera flash; playing a soft noise such as a relaxing waves sound; playing a loud noise such as bowling pings crashing; changing phone wallpaper; making a call to supporter; or performing an automated follow up call to the client.

As a result of the preceding refinement operations, the items in the expert-driven content playlists may be delivered to the client **106** (operation **668**). The professional user may be provided with additional controls and opportunities to further customize or shape the content, similar to the preceding operations.

Assessments and Motivation Workflow Examples

The information system **100** may offer mechanisms for clients to push or relay hardware monitoring data (e.g., physiological monitoring data) to professional users. For example, data from a client's personal exercise tracking device would be a complementary technology to the professional user's coaching, because it provides data points for a professional user to consider. The professional user seeing the exercise tracking device data might respond by saying: "I see you are

not motivated in the morning. My suggestion is—first thing after you wake up, eat a banana, bagel, and do ten minutes of yoga. This will provide you with a boost of energy in the morning."

The information system **100** may enhance the data provided from the personal exercise device by leveraging a professional user's expertise to coach the client **106** to a better lifestyle. The data from the personal exercise device may also become an activity verification technology using GPS and timestamps. (For example, client A went for a walk around the block based on the recorded activity in the personal exercise device, and is beginning to perform more physical activity).

A client's use of an exercise tracking device does not change behavior by itself. But if a coach sees the data, holds the client accountable, and makes decisions on the data, then the exercise tracking device becomes an integrated part of the coaching plan from which the professional user can adapt his or her style to the particular client. Thus, professional users have an incentive for their clients to wear an exercise tracking device and use other data collection systems, because it can be used to enhance the service offerings and decision making with data points collected outside of in-person meetings.

Hardware monitoring and tracking devices may integrate directly or indirectly with interfaces and other services of the information system **100**. Example types of hardware/software monitoring and tracking devices and applications include, but are not limited to: Nike+ FuelBand; Nike+ Running; Fitbit; My Fitness Pal; Jawbone UP; Map My Run/Ride; RunKeeper; DailyBurn; Weight Watchers.

The presentation and control of information from professional users from the information system **100** may be provided in connection with an internet-delivered graphical user interface, such as embodied in a website or software application. FIGS. **7**A, **7**B, **7**C, **7**D each provide examples of graphical user interfaces for interaction with the information system **100** in connection with the techniques described herein.

FIG. **7**A depicts a graphical user interface **700**A providing an illustration of a particular suggestion playlist, managed by a professional user, that may be purchased or subscribed to by the client **106**. For example, a particular professional user may include a listing of exercise videos and suggestions, available for purchase or subscription. The interface may also provide links to further "details", "rating and reviews", and "related" suggestion playlists for the particular suggestion playlist.

FIG. **7**B depicts a graphical user interface **700**B providing an illustration of reviews and ratings for a particular suggestion playlist, managed by a professional user, that may be purchased or subscribed to by the client. For example, different users may provide feedback and detailed reviews, including "helpfulness", "difficulty", and "timeliness" ratings for a particular professional user or playlist offered by a particular professional user.

FIG. **7**C depicts a graphical user interface **700**C providing an illustration of related suggestion playlists, managed by professional users, that may be purchased or subscribed to by the client. This listing of related suggestion playlists may allow a particular client to browse available offerings by a particular professional user or based on a particular subject (such as "movement" activities). Other options in the interface may include enabling the client to buy or subscribe to the playlist; provide the playlist as a gift to a friend; add the playlist to a wish list; share to a social media site; or discuss within the activity feed managed by the information system **100**.

FIG. **7**D depicts a graphical user interface **700**D providing an illustration of menus to select offerings from professional users that may be purchased or subscribed to by the client. This may include the selection of categorizations for the client, including "featured" professionals, "top professionals", "recommended" professionals, "celebrity" professionals, location-nearest professionals, highest rated professionals, and offerings by price. The professionals may be selected based on a particular topic such as weight loss, depression, diabetes, smoking cessation, or other expertise. The available suggestions from particular professional users may be filtered by based on featured suggestions, top suggestions, recommended suggestions, categories such as injury rehab, smoking cessation, cardiovascular rehab, or diabetes management, and subcategories such as weight loss—eating, weight loss—movement, weight loss—self-view, or combinations of subcategories.

FIG. **7**E depicts a graphical user interface **700**E providing an illustration of a suggestion playlists having varying communication timings. For example, the suggestion playlist may include the generation of suggestions and suggestion content at certain intervals (e.g., every 24 hours), for a certain duration (e.g., 15 minutes). Likewise, the timing of reminders, motivators, and number of times to repeat content or content delivery may also vary.

FIG. **7**F depicts a graphical user interface **700**F providing a specific interface to allow the change of suggestion timing for a suggestion playlist. For example, the timing of the content and associated content reminders and motivators may be customized by a coaching user, according to desired timing intervals, days of the week, or a repetition schedule.

Although the graphical user interfaces **700**A-**700**F were provided with particular examples and illustrations, it will be understood that a wide variety of other graphical user interfaces may be used and employed in connection with the selection of professional user suggestions and the interaction with the goal-based workflows described herein.

Coaching and Communication Timing

The timing(s) of communications for a suggestion playlist of expert-driven content may vary depending on a number of variables. For example, these variables may include intensity (number of communications at a particular time); frequency (number of a communication); duration (how long a particular communication lasts); timing relevance (how well a particular communication maps to current member activity); delay (during what window a particular communication may be sent); multiple threads (sending two communications concurrently); or sequencing (sending one communication before another). Such communications may be delivered via chat, SMS, email, video chat, suggestions, prompts, motivators, reminders, tweets, social network messages, and the like.

FIG. **8**A depicts an example of variations of communication timing for communications from an expert in an expert-based content workflow within a chart **800**. Different examples may be provided to map different intensities, sequences, frequency, and intensity, and multiple threads. Thus, particular communications 1-7 may be spaced and sequenced differently, providing a user with differing approaches to expert-driven suggestions.

FIG. **8**B depicts an example of variations of communication timings mapped to user activity, profile information, and real time data elements within a graph **850**. As shown, a particular variable or combination of variables may correlate to responses and completed suggestions by category. The

communication timings may be mapped to periods of time, based on responses and non-responses obtained over days, weeks, and months.

Dynamic Content-Driven Feedback and Prompts

The delivery, presentation, and response mechanisms for providing suggested content and suggested actions may be provided in a linear process to encourage action and appropriate feedback. As reinforcement to the playlists and the coaching style, a prompting system may be performed in connection with goal-based workflows managed by the professional users.

Prompt two-way communication initiated on conditional logic (e.g., from completion of a countdown timer, a count up timer, or an event trigger) may demand a response to an action, or serve as a one-way message for informational purposes (e.g., "We sent a message to your supporter to help you out"). Prompts may be configured to follow a "3 strike rule"—such that if there is no response to the first prompt, another prompt will be sent. If the client **106** does not respond to three messages (by notifications, email, texts) then the information system **100** will stop sending them.

One set of examples of prompted actions requiring a response may include: Suggestion expired; Need to fill out profile; Need to set destination; Need to add a Supporter; Subscription expired; Haven't participated in three days, and not on "vacation mode"; Low on integrity—Client may restart goal.

Prompts are an enhanced feature of coaching that push the client **106** towards his or her environmental goal **204** in a variety of styles (e.g. a mild, moderate, or aggressive style). Rather than simply monitoring the client's progress towards their environmental goal **204**, the information system **100** may incorporate a pushing strategy with feedback, to obtain clarification of the various ways (and reasons) that the client **106** can be motivated towards his or her environmental goal **204**.

The content suggestion engine techniques and operations described herein may also incorporate a variety of machine-learning and artificial intelligence concepts to adapt to context information (such as feedback), and deliver the content to the client **106** using appropriate timings and mechanisms. As the suggestion engine **102** produces suggested actions and obtains client feedback, the suggestion engine **102** may start to learn what is successful, and apply greater weights to a particular suggested action with a higher likelihood to succeed, thereby producing a cycle of improvement with a greater likelihood of progress towards goals **204**.

FIG. **9**A illustrates an example technique **900** of client interactivity with a suggested action generated from the suggestion engine **102**. At operation **902**, content can be matched to a client **106**, such as through data processing techniques, and filtering and weighting techniques produced in connection with a content suggestion or selection engine. At operation **904**, the client **106** may respond to the suggested action, such as by accepting or rejecting the suggested action message. A lack of response within a period of time may also serve as a response. At operation **906**, the status of the suggested action may be determined, such as determining if the suggested action message was accepted or rejected, or when the suggested action message is accepted and whether the action in the suggested action message is completed or not. At operation **908**, a support message may be sent to the client **106**, such as sending the client **106** an encouraging or motivating message to try to get the client **106** to complete the action. At operation **910**, content relativity may be determined, and such relativity may be recorded for use in a future suggested action.

If questionnaires or psychological/physiological profiling indicate that a problem exists in an area (e.g., movement, eating, self view, etc.) that is different from the goal(s) **204** created by the client **106**, then the system may ask the client **106** to review the goal(s) **204** or suggest the client **106** add another goal and indicate what that goal is. The system may also encourage the client **106** to achieve the goal **204** by giving reward points (e.g., kudos) or other incentives.

As a new client signs into the system and is given the opportunity to fill out questionnaires or to begin a suggested action, he or she may decide to use the system right away without filling out much information about them. These clients may be given a suggested action without much data about the client **106** that the suggestion engine **102** can process. A new client may also choose a program from a group of pre-created programs. These programs may include a suggested action that encourages the client **106** to achieve goal(s) **204** related to movement, eating, or self view, encourages the client to perform suggested actions that helps them learn the different features of the system, record how the client **106** uses the system, and suggests that the client **106** fill out questionnaires, at intervals or regularly. Getting feedback on a suggested action may help the suggestion engine **102** determine which suggested action to recommend to the client **106** after the program is complete.

When completed, a suggested action may be put back into a suggested action database. Any completed suggested actions may be withheld from retrieval from the suggested action database for a specified period of time. Such withholding time may be based on a client preference, such as the client **106** indicating that they prefer variety or sameness in the suggested action messages **502** that are presented to them. For example, if a client **106** indicates that they prefer variety, a completed suggested action may be withheld for a longer period of time than if the client **106** indicates they prefer sameness.

A goal may be accomplished when the client **106** indicates the goal has been accomplished or when the system determines that the goal has been accomplished. For example, the system may ask the client **106** or the client's supporters if the goal has been accomplished.

A client **106** may indicate that the suggested action was not timely. In such situations the system may ask the client **106** when the suggested action message would be or would have been timely. A timing tag related to a suggested action message may be adjusted accordingly. Timing tags may indicate an amount of time that the client **106** may be given to complete the task, such as 15, 30, 45, or 60 minutes, etc.

The difficulty rating (a tag) of a suggested action may be altered in accordance with client feedback. The weight of a suggested action may be altered as a client's ability to complete a type of suggested action changes. For example, if a client **106** rates a suggested action as too hard, the weight of the suggested action may be decreased and the weight of suggested actions with lower difficulty may be increased.

FIG. **9**B provides an illustration of a technique **950** for delivering suggested actions and obtaining feedback from human users according to an example. The delivery, presentation, and response mechanisms for providing suggested content and suggested actions may be provided in a linear process to encourage action and appropriate feedback.

At operation **952**, a client **106** may be presented with up to N suggested actions. The suggested actions may be chosen from a pool of possible suggested actions using various data processing techniques, such as filtering and weighting. At operation **954**, the system may receive the client's choice of suggested action(s). At operation **956**, the system may send a

reminder to the client **106** that the chosen suggested action should be accomplished. At operation **958**, a motivating message may be sent to the client **106**. The motivating message may be configured as a function of the client's personality type **210**, the goal(s) **204**, the time frame which the client **106** set to accomplish the goal **204**, other data **208**, or contextual user information.

At operation **960**, the system may prompt the client **106** to indicate whether they performed the chosen suggested action or not. There are at least three responses the client **106** may provide.

In one scenario, at operation **962**, the client **106** may respond that the suggested action was performed. At operation **968**, the system may send an affirming message (e.g., a congratulations or kudos) to the client **106**. At operation **974**, the system may obtain feedback from the client **106**, such as by asking the client **106** questions about their experience in performing the suggested action.

In another scenario, at operation **964**, the client **106** may respond that the suggested action was not performed. At operation **970**, a conciliatory message may be sent to the client **106** from the system. At operation **976**, the system may obtain feedback from the client **106**, such as by asking why the suggested action was not completed.

In another scenario, at operation **966**, the client **106** may respond by ignoring the prompt. At operation **972**, the system may resend the prompt, send a reminder that the suggested action should be performed, or present a different set of suggested actions, such as at operation **954**. Regardless of the response received from the client **106**, the system may proceed to present subsequent suggested actions at operation **978** (e.g., the process may start over at operation **952**).

FIG. **10** illustrates an example technique **1000** of processing user interaction with suggested actions of a suggestion in a suggestion playlist in a goal-based workflow according to an example described herein. First, a supporter may send a particular suggestion to a client **106** (operation **1002**). A notification of the particular suggestion may be sent to the client **106** (operation **1004**). The notification may indicate that the suggestion has been sent to the client **106**. The suggestion may appear in a suggestion playlist for the client **106** (operation **1006**).

At this point the client **106** may take one of at least three actions: 1) the client **106** may accept the suggestion to make the suggestion part of the playlist (operation **1008**); 2) the client **106** may reject the suggestion and refuse to perform the suggested action in the suggestion (operation **1010**); or 3) the client **106** may ignore the suggestion and not do anything with regard to the suggestion (operation **1012**).

If the client **106** accepts the suggestion, it may be determined if the suggestion was completed (decision **1014**), such as by asking the client **106** if they completed the suggestion. If the suggestion was completed, then a success notification may be sent to the supporter who sent the suggestion (operation **1020**). If the suggestion is not completed, then a reminder may be sent to the client **106** or a failure notification may be sent to the supporter who sent the suggestion (operation **1022**). A client integrity rating may be updated in accord with the result (whether or not the client **106** completed the action) (operation **1024**). A supporter effectiveness rating may be updated with the result (operation **1026**). Various attributes (e.g., difficulty, helpfulness, timeliness) of the suggestion also may be updated (operation **1028**).

If the client **106** rejects the suggestion (operation **1010**), the suggestion may be removed from the suggestion playlist (operation **1016**) and the system may prevent the suggestion from being suggested again for a period of time or indefinitely (operation **1030**).

If the client **106** ignores the suggestion, the suggestion may be removed from the suggestion playlist (operation **1018**) and the suggestion may be made available for the next, or a subsequent round, of suggestions (operation **1032**), or the system may prevent the suggestion from being suggested again for a period of time.

A reminder may be provided to the client **106** regarding the suggestion. The reminder is a message from the information system **100** that is sent at a time between when a suggested action is accepted or ignored and when their suggested action is completed. A reminder can take the form of a calendar reminder. Reminders may be configured as a function of a category that the suggested action belongs to, such as eating, movement, or self view. In some examples, a self-view suggestion may be accompanied by a reminder to complete the action about 6 hours before the suggestion may be completed. In some examples, an eating suggestion may be accompanied by a reminder that is sent to the client **106** about a half-hour before the meal or preparation for the meal. In some examples, a movement suggestion may be accompanied by a reminder that is sent to the client **106** about 12 hours before the client **106** is to complete the suggestion. Other notifications may be sent to the client **106** or other users of the application. A notification may be a "call to action" that directly impacts the client **106**, a supporter in the supporter network **104**, or a dual role user regarding their support network, progress, account settings, subscription, or other miscellaneous items.

In some examples, the supporter may be a "professional supporter," such as a professional user as described herein, and designated to provide fee-based or compensated support to various clients. FIG. **11** depicts an establishment of a support agreement with between client users and a professional supporter, in an example technique **1100** according to an example described herein.

As shown, a professional supporter may establish an account through a sign up and account verification process (operation **1102**). This may include the professional supporter filling out a sign up form, and be subject to an account verification or confirmation process. The professional supporter then may be verified by one or more users (operation **1104**), which may include administrative users, or recommendations from clients. For example, the professional supporter may be a "basic" or regular supporter until verified/confirmed. The professional supporter will then establish their profile (operation **1106**) to include information such as area of practice/expertise, certification(s), qualifying degree, billing for services, biographical information, publications, client reviews, and contact information.

As shown, the professional supporter may invite one or more client users (operation **1108**) or otherwise select certain clients for a supporting role. For example, invitations may be sent by email, social network, or based on client actions. After the respective clients accept the supporting role, the professional supporter will establish a support agreement with the one or more client users (operation **1110**). This support agreement may include varying levels of support based on varying fee levels and charges. In some examples, the client user may also suggest changes to the support agreement for approval by the professional supporter.

After establishment of the support agreement, payment is facilitated between the one or more client users and the professional supporter (operation **1112**). This payment may occur before, during, or after the term of the support agree-

ment. The subscription system may take a portion of the payment (for example, compensating the professional supporter 70% of all payments received). During the support agreement, the professional supporter will provide content (including customized content) to the one or more client users (operation **1114**). In some examples, the professional supporters may receive more status information about the psychological or activity status of one or more client users than basic supporters. Also in some examples, the support agreement may be renewed (decision **1116**), which if renewed, will result in a new support agreement (operation **1110**), payment (operation **1112**), and content to the client (operation **1114**).

Supporter Interaction and Workflow Examples

The goal-based workflows may be configured to integrate selection and delivery of suggested content with insight and input from supporters in the supporter network **104**. A supporter may be a personal acquaintance of a client, a trained motivator, a dietary professional, a psychologist or other psychological expert, another client facing a similar problem, a random person interested in helping people achieve their goals, or any other person the client **106** may choose to help them achieve their goals. For example, a client may know that they need someone to "be on their case" about completing suggestions and may know somebody who is good at motivating them to complete actions. That person could be a supporter for that client. In another example, a client having trouble eating can have a supporter who is a dietary expert with experience in nutrition and curbing bad eating habits. The supporters may be chosen by the client **106** or assigned to the client **106** by the system. Another user of the application may request to be a supporter for the client **106** and the client **106** may be given an opportunity to either accept or reject the request.

FIG. **12**A illustrates a flowchart depicting a workflow **1200** for client and supporter interaction within an information service providing a software or other user-interactive application for clients and supporters. A client may establish a subscription to the application (operation **1202**). This may be accomplished by visiting a website or purchasing/downloading software and following steps suggested by the website or software. The client **106** can fill out an assessment profile (operation **1204**). The assessment profile may be configured to obtain data **208** from the client **106**. The client can set one or more goals (operation **1206**). The client can choose supporters, supporters may be recommended to the client **106**, supporters may request to work with the client **106**, or supporters may be otherwise associated with the client **106** (operation **1208**). The client **106** also establishes methods of which they would prefer to be contacted by supporters or the application (operation **1210**). The client **106** can access the client content service interface of the application (operation **1212**) (e.g., a client content service interface shown in FIG. **13**).

When the client **106** adds a supporter (operation **1208**), a request may be sent to the supporter. Optionally, this may be accomplished through interaction with the communication interface (operation **1214**) (e.g., a communication interface shown in FIG. **13**). The supporter may receive the request (operation **1216**). Using the application, the supporter may accept the request to become a supporter for the client **106** (operation **1218**). The supporter may access the supporter content service interface of the application (e.g., a supporter content service interface shown in FIG. **13**) (operation **1220**).

FIG. **12**B illustrates a flowchart depicting a workflow **1250** for supporter interaction within an information service providing a software or other user-interactive application for clients and supporters. In correspondence with the configuration of FIG. **12**A, the flowchart illustrates supporter-based operations to establish a subscription and generate content for communication to supported clients.

In the workflow **1250**, a supporter may establish a subscription to the application (operation **1252**). This may be accomplished by visiting a website or purchasing/downloading software and following steps suggested by the website or software. The supporter will receive the support request from a client (operation **1216**). In response, the supporter will accept the request (operation **1254**). The supporter then accesses the content service interface(s) (operation **1256**), and uses the interface to generate content for the client (operation **1260**). The content is then provided to the client through integration with the communication service (operation **1214**).

In connection with the mechanisms provided by the integration with the communication service (operation **1214**), the client may receive content from the supporter (operation **1268**), and provide a response (or fail to provide a response) to the content (operation **1268**). To encourage response to content, the supporter may provide one or more reminders to the client regarding the content and associated actions or goals (operation **1262**). The client may also provide a rating of the content (operation **1270**). The rating of the content, and appropriate reminders and feedback (operation **1264**), may be exchanged through the integration with the communication service (operation **1214**).

The supporter may be provided with feedback on a variety of environmental data values of the client, provided in context to transmit meaningful data about the client to the supporter. The environmental data values may include moment-in-time data used to craft informed and relevant selections, including environmental considerations, psychological or physiological considerations, even the weather at the location of the user. Further, the supporter may be able to choose suggested content among available choices and provide guidance to the communication process (such as choosing one option among three suitable options, based on the supporter's understanding of which suggested content is most relevant or would be most well-received by the client).

FIG. **13** illustrates a block diagram of interface components **1300** for client and supporter interaction (e.g., a professional user coaching interaction with a particular client) within a content service according to an example described herein. The interface components **1300** may include a client content service interface **1302**, a supporter content service interface **1304**, or a communication interface **1306** between the client content service interface **1302** and the supporter content service interface **1304**.

The client content service interface **1302** may include an assessment interaction widget **1308**, a client progress widget **1310**, a client supporter management widget **1312**, a client suggestion widget **1314**, a client journal widget **1316**, or a client inspiration widget **1318**. The assessment interaction widget **1308** may be communicatively coupled to the client suggestion widget **1314** or the client progress widget **1310**. The assessment interaction widget **1308** may be communicatively coupled to the supporter content service interface **1304**, such as to a supporter management widget or a supporter suggestion interaction widget **1324** of the supporter content service interface **1304**. The assessment interaction widget **1308** may determine an amount of client involvement with the application and may cater the presentation of the suggestions and other messages based on the amount of client involvement.

The client progress widget **1310** may be communicatively coupled to the client supporter management widget **1312** or the client suggestion widget **1314**. The client progress widget **1310** may be communicatively coupled to a supporter progress widget **1320** of the supporter content service interface **1304**. The client progress widget **1310** may monitor a client's progress towards a goal. The client progress widget **1310** may send other widgets updates regarding the client's progress towards a goal, such as indicating when a suggestion is completed or how many suggestions the client **106** has left to complete before the goal is accomplished.

The client supporter management widget **1312** may be communicatively coupled to a supporter management widget **1322** or a supporter assistance widget **1326** of the supporter content service interface **1304**. The client supporter management widget **1322** may be configured to prompt a client for data **208**, feedback on the client's opinion of the system, and may send information to the supporter management widget **1322**, such as information indicating to the supporter management widget **1322** that a supporter should send a suggestion to the client **106** or that the supporter should send an encouraging message to the client **106**.

The client suggestion widget **1314** may be communicatively coupled to a supporter suggestion interaction widget **1324** of the supporter content service interface **1304**. The client suggestion widget **1314** may present suggestions to the client **106**, which the client **106** may then accept, reject, or ignore. The suggestions presented may be received from the supporter suggestion interaction widget **1324** or content suggestion engine.

The client journal widget **1316** may be communicatively coupled to the client inspiration widget **1318**. The client journal widget **1316** may allow the client to have a sort of diary that records their experience(s) interacting with the application. The client journal widget **1316** may prompt the client for entries or may be passive and allow the client to create journal entries as the client desires.

The client inspiration widget **1318** may be communicatively coupled to the supporter assistance widget **1326**. The client inspiration widget **1318** may record the reasons that the client **106** is trying to achieve a goal and remind the client **106** about those reasons. The reminders may be random, scheduled, or configured to not appear in some instances, such as when a client indicates that they do not want to receive these reminders.

The supporter content service interface **1304** may include the supporter progress widget **1320**, the supporter management widget **1322**, the supporter suggestion interaction widget **1324**, or the supporter assistance widget **1326**. The supporter progress widget **1320** may be communicatively coupled to the supporter management widget **1322**. The supporter progress widget **1320** can keep a supporter abreast of how the client **106** is progressing towards the goal.

The supporter management widget **1322** may be communicatively coupled to the supporter suggestion interaction widget **1324**. The supporter management widget **1322** may monitor how the supporter interacts with the client **106** and determine whether or not that interaction is effective. These determinations may be sent to the supporter suggestion interaction widget **1324**.

The supporter suggestion interaction widget **1324** may be communicatively coupled to the supporter assistance widget **1326**. The supporter suggestion interaction widget **1324** may prompt a supporter to send a suggestion, encouraging message, or other content, such as scientific articles or inspirational stories, to the client **106**. The supporter suggestion interaction widget **1324** may indicate to the supporter that the supporter should leave the client **106** alone for a specified amount of time (e.g., minutes, hours, days, weeks, etc.).

The supporter assistance widget **1326** may help the supporter choose suggestions, personalize suggestions, or draft other messages to the client **106**. The supporter assistance widget **1326** may help the supporter navigate the application or get in contact with other supporters, such as other supporters helping clients with similar goals or lifestyles.

The types and amount of communications between the various widgets (and between the client and supporter) may be customized, to be expanded or narrowed with user preferences. For example, various privacy settings and preferences may be set by a user to share more or less information about specific activities or conditions, or to send and receive more or less information from particular users. Many of the data points can be customized to different levels to control the types and amount of interactions.

FIG. **14** illustrates a flowchart **1400** of supporter interaction (e.g., professional user interaction) with a client in a goal-based workflow according to an example described herein. When a client answers an episodic question (e.g., a question to the client **106** that is designed to obtain or measure the psychological state of the client **106**) negatively, such as by responding "terrible", "not good", or the like to an episodic question "How are you today?" (operation **1402**), the application can ask the client **106** if they would like help (operation **1404**). When the client **106** indicates that they do not want help, the client **106** can be sent to the dashboard (operation **1406**) (further described below with reference to dashboard **1570** in FIG. **15**B).

When the client **106** indicates that they do want help, such as by answering "Yes" to the question "would you like help?" (operation **1408**), requesting help using the client supporter management widget **1312**, or requesting help on a link provided on a suggestion (operation **1410**), then the client **106** may be presented with a list of supporters. The list of supporters may be provided from list of supporters from the client supporter management widget **1312** (operation **1412**). The client **106** may be asked who they would like to contact to help them (operation **1414**). When the client **106** requests help using a link or button on a suggestion, such as an accepted suggestion, that was sent to the client **106** from a supporter, then the client **106** may be directed (e.g., automatically), to the supporter that sent the suggestion. The client **106** may select one or more supporters, or groups of supporters to help. The client **106** may add a message to a help request (operation **1416**) and the help request may be sent to the respective supporter(s), such as by the client **106** selecting a "send request" option (operation **1418**). The application may send the help request (along with any messages the client **106** added) to the selected supporters (operation **1420**). The help request may be accompanied by notifications that are configured to alert the supporter, such as a text, email, or other notification, that the client **106** is looking for help.

The supporter can click on or otherwise interact with the help request (operation **1422**). The application may prompt the supporter to take an action (decision **1424**) by asking if the supporter if he or she would like to send an inspirational message, suggestion, other message, or if they would like to contact the client **106** directly. If the supporter would like to contact the client **106** directly then a conversation box or other conversations widget can be opened for the supporter to chat with the client **106** (operation **1426**). If the supporter would like to send inspiration to the client **106**, the client inspiration widget **1318** may be accessed so that the supporter can determine what inspires the client **106** (operation **1428**). If the supporter would like to forward a suggestion produced by the

information system, a supporter suggestion interaction widget **1324** or other suggestion forwarding widget may be accessed to forward suggestions from the supporter to the client **106** (operation **1430**).

FIG. **15** illustrates a flowchart **1558** of data functionality and feature components available within an information service according to an example described herein. A client or supporter may access the functionality and feature components through sign in to the information service (data operation **1560**). The type of user that has signed in can be determined (decision **1562**). If the user is both a client and a supporter, the supporter and client functionality and features may be loaded for viewing and interaction (using data set **1564**). If the user is just a client, then the client functionality and features may be loaded for viewing and interaction (using data set **1566**). If the user is just a supporter, then the supporter functionality and features may be loaded for viewing and interaction (using data set **1568**). Client functionality and features (from data set **1566**) may include the widgets provided in the client content service interface **1302** (described with reference to FIG. **13**). Supporter features and functionality (from data set **1568**) may include the features and functionality of the widgets provided in the content service interfaces **1302**, **1304**. A dashboard **1570** that displays the client or supporter features and provides the client or supporter functionality to the respective user may be displayed to the user.

Computing System Architectures and Example Implementations

FIG. **16** illustrates a flowchart **1600** of an example implementation method of providing expert-based content and coaching from a professional user to a particular client or set of clients using the information system **100** according to an example described herein. The particular sequence depicted in the flowchart **1600** is provided as a non-limiting example, and illustrates a workflow involving a relationship between a coach/expert/other professional user and one or more clients. Other aspects of the workflow may include interactions with the previously described information system and associated databases and graphical user interfaces, with individual or groups of users.

The flowchart **1600** illustrates a series of operations including establishing a relationship between the professional user and one or more clients (operation **1610**). The coaching operations may be assisted by accessing profile and relevant information for the one or more clients (operation **1620**). From the profile and relevant information, the information system **100** may suggest appropriate content and content or timing for the one or more clients (operation **1630**).

The professional user will provide changes and custom content to the information system (operation **1640**). The information system **100** will use these changes and custom content to create a content playlist for the particular user(s) being coached by the professional user (operation **1650**).

The information system **100** will deliver the content in the content playlist to the client(s) using coaching tools and various delivery mechanisms enabled by the information system (operation **1660**). The information system **100** will then obtain feedback, responses, and other usage information of the client (operation **1670**), for example to provide a response on the effectiveness of the coaching back to the professional user.

Although some of the previous examples were provided with reference to specific medical conditions and human activities such as weight loss and weight loss-related activities, it will be understood that the applicability of the present system may apply to a variety of human behaviors and goal-based activities in medical and non-medical settings. A non-limiting, illustrative listing of the applicability of the present techniques to medical conditions includes weight loss, smoking cessation, addition recovery, chronic illness management, psychological support, and the like. Another non-limiting, illustrative listing of the applicability of the present techniques includes application to non-medical settings such as education and learning, sport activities and sports training, and other scenarios where human activity is correlated to some goal or achievement.

FIG. **17** illustrates an example of a system configuration of an information system **1700** configured to provide content. The information system **1700** may include a content database **1702**, a rules database **1704**, a goal information database **1706**, a user information database **1708**, a suggested action database **1710**, a tagging database **1712**, a client profiling database **1714**, and a coaching database **1716**.

The content database **1702** may include information from external sources, such as the supporter network **104**, a professional expert working in a field relevant to a goal **204**, other databases, or a combination thereof, among others. The rules database **1704** may include rules for formatting and providing personalized suggestions (e.g., suggested actions) to the client **106**. Such rules may include timing restrictions, wording suggestions or restrictions, or suggested action restrictions (e.g., a suggestion with a certain tag should not be presented to a specific client, such as the client **106**).

The goal information database **1706** may include data relevant to getting the client **106** to achieve a particular goal **204**. The goal information may include certain activities that are a prerequisite to achieving a goal **204** (e.g., running a marathon requires the client to run to achieve the goal **204**), recommended for achieving the goal **204** (e.g., stretching muscles and breathing exercises are helpful, but not essential, in training for a marathon), fun (e.g., things to keep the client **106** in a positive state of mind or reward the client **106** for their hard work or achievements), or a combination thereof, among others.

The user information database **1708** may include information gained from questionnaires or learned through the client **106** or supporters in the supporter network **104** using the system. The user information database **1708** may include information about all users of the system including supporters, clients **106**, administrators of the system, or potential clients, among others. The suggested action database **1710** may include suggestions including pre statements, action statements, and post statements. The suggested action database **1710** may also include a record of which client has completed which suggestion, when the client **106** completed the suggestion, or how long it has been since the system recommended that suggestion to the client **106**. The tagging database **1712** may include a record of all the tags and tagging relationships that have been created for suggestions, playlists, or programs, and which suggestions, programs, or playlists the tag is associated with.

The client profiling database **1714** may include information such as member profile information **400** described herein, and other client profiling information relevant to interactions with a professional user. The coaching database **1716** may include information on professional users, including feedback, stylizing templates, and other mechanisms to facilitate the generation and delivery of content from professional users.

While FIG. **17** shows eight separate databases **1702-1716**, the information contained within the databases may be combined or divided to reside within any number of databases.

For example, the information in the suggested action and tagging databases **1710**, **1712** may be combined into a single database, or the user information and coaching databases **1708**, **1716** may be combined into a single database.

The information system **1700** may include one or more modules including a content suggestion module **1720**, a delivery module **1730**, a feedback module **1740**, a monitoring module **1750**, a supporter module **1760**, a conditions module **1770**, a client profiling module **1780**, and a coaching module **1790**. The content suggestion module **1720** may receive suggestions or have access to the suggested action database **1710**. The content suggestion module **1720** may include filter(s) and the weight(s), such as to allow the content suggestion module **1720** to filter, prioritize, or present suggestions to the client **106**.

The delivery module **1730** may present at least one suggestion or message to the supporter network **104** or the client **106**, such as at a certain relevant time. The delivery module **1730** may be configured to modify or amend the suggestion or message that is delivered so as to be appropriate for the client **106**. Such a configuration may make the client **106** more likely to complete the suggestion.

The feedback module **1740** may be configured to receive feedback about suggestions from a client **106**, process the feedback, and send the processed feedback to the user information database **1708**, rules database **1704**, content database **1702**, or suggested action database **1710**.

The monitoring module **1750** may be configured to monitor a client's progress towards their goal(s) **204**, a client's progress on completing a suggestion, program, or playlist, and may provide the delivery module **1730** with information relevant to what messages (e.g., prompts, reminders, or encouragements) should be sent to the client **106**.

The supporter module **1760** may be configured to provide the supporter network **104** with the ability to make suggestions for a suggestion to present to the client **106**, provide information relevant to getting the client **106** to their goal **204** (e.g., likes, dislikes, barriers **214**, or incentives **216** for the client **106**, etc.), suggest messages to send to the client **106** that may be modified by the delivery module **1730**, or suggest tags that should be associated with the client **106**.

The conditions module **1770** may be configured to maintain relevant information from the ecosystem of conditions **212** and the client data conditions **108** that are relevant to the selection and delivery of relevant content. This may include direct or derived contextual data, or data relevant to barriers and incentives. For example, the contextual information maintained in conditions module **1770** may provide input for rules to express the conditions to deliver content to the proper user, at the proper time, in the proper context, and with the proper communication medium.

The client profiling module **1780** may be configured to collect client information such as the member profile information **400** described with reference to FIG. **4**. The client profiling module may collect, compile, and monitor a variety data points used by a professional user for delivery of coaching-related content and assistance.

The coaching module **1790** may be configured to collect coaching information on the professional user and provide functions to initiate various interactions with the member client(s). These interactions may be facilitated through various communication mechanisms, content generation mechanisms, and mechanisms to assist the professional user with management of his or her personal network of client users.

FIG. **18** is a block diagram illustrating an example computer system machine upon which any one or more of the methodologies herein discussed may be run. Computer system **1800** may be embodied as a computing device, providing operations of the suggestion engine **102**, supporter network **104**, information system **100** or interface components **1300** (from FIGS. **1** and **13**), or any other processing or computing platform or component described or referred to herein. In alternative embodiments, the machine operates as a standalone device or may be connected (e.g., networked) to other machines. In a networked deployment, the machine may operate in the capacity of either a server or a client machine in server-client network environments, or it may act as a peer machine in peer-to-peer (or distributed) network environments. The computer system machine may be a personal computer (PC) that may or may not be portable (e.g., a notebook or a netbook), a tablet, a set-top box (STB), a gaming console, a Personal Digital Assistant (PDA), a mobile telephone or smartphone, a web appliance, a network router, switch or bridge, or any machine capable of executing instructions (sequential or otherwise) that specify actions to be taken by that machine. Further, while only a single machine is illustrated, the term "machine" shall also be taken to include any collection of machines that individually or jointly execute a set (or multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

Example computer system **1800** includes a processor **1802** (e.g., a central processing unit (CPU), a graphics processing unit (GPU) or both), a main memory **1804** and a static memory **1806**, which communicate with each other via an interconnect **1808** (e.g., a link, a bus, etc.). The computer system **1800** may further include a video display unit **1810**, an alphanumeric input device **1812** (e.g., a keyboard), and a user interface (UI) navigation device **1814** (e.g., a mouse). In one embodiment, the video display unit **1810**, input device **1812** and UI navigation device **1814** are a touch screen display. The computer system **1800** may additionally include a storage device **1816** (e.g., a drive unit), a signal generation device **1818** (e.g., a speaker), an output controller **1832**, a power management controller **1834**, and a network interface device **1820** (which may include or operably communicate with one or more antennas **1830**, transceivers, or other wireless communications hardware), and one or more sensors **1828**, such as a GPS sensor, compass, location sensor, accelerometer, or other sensor.

The storage device **1816** includes a machine-readable medium **1822** on which is stored one or more sets of data structures and instructions **1824** (e.g., software) embodying or utilized by any one or more of the methodologies or functions described herein. The instructions **1824** may also reside, completely or at least partially, within the main memory **1804**, static memory **1806**, and/or within the processor **1802** during execution thereof by the computer system **1800**, with the main memory **1804**, static memory **1806**, and the processor **1802** also constituting machine-readable media.

While the machine-readable medium **1822** is illustrated in an example embodiment to be a single medium, the term "machine-readable medium" may include a single medium or multiple media (e.g., a centralized or distributed database, and/or associated caches and servers) that store the one or more instructions **1824**. The term "machine-readable medium" shall also be taken to include any tangible medium that is capable of storing, encoding or carrying instructions for execution by the machine and that cause the machine to perform any one or more of the methodologies of the present disclosure or that is capable of storing, encoding or carrying data structures utilized by or associated with such instructions. The term "machine-readable medium" shall accordingly be taken to include, but not be limited to, solid-state memories, optical media, and magnetic media. Specific

examples of machine-readable media include non-volatile memory, including, by way of example, semiconductor memory devices (e.g., Electrically Programmable Read-Only Memory (EPROM), Electrically Erasable Programmable Read-Only Memory (EEPROM)) and flash memory devices; magnetic disks such as internal hard disks and removable disks; magneto-optical disks; and CD-ROM and DVD-ROM disks.

The instructions **1824** may further be transmitted or received over a communications network **1826** using a transmission medium via the network interface device **1820** utilizing any one of a number of well-known transfer protocols (e.g., HTTP). Examples of communication networks include a local area network (LAN), wide area network (WAN), the Internet, mobile telephone networks, Plain Old Telephone (POTS) networks, and wireless data networks (e.g., Wi-Fi, 3G, and 4G LTE/LTE-A or WiMAX networks). The term "transmission medium" shall be taken to include any intangible medium that is capable of storing, encoding, or carrying instructions for execution by the machine, and includes digital or analog communications signals or other intangible medium to facilitate communication of such software.

Other applicable network configurations may be included within the scope of the presently described communication networks. Although examples were provided with reference to a local area wireless network configuration and a wide area Internet network connection, it will be understood that communications may also be facilitated using any number of personal area networks, LANs, and WANs, using any combination of wired or wireless transmission mediums.

The embodiments described above may be implemented in one or a combination of hardware, firmware, and software. For example, the information system **100**, **1700** may include or be embodied on a server running an operating system with software running thereon. While some embodiments described herein illustrate only a single machine or device, the terms "system", "machine", or "device" shall also be taken to include any collection of machines or devices that individually or jointly execute a set (or multiple sets) of instructions to perform any one or more of the methodologies discussed herein.

Embodiments may also be implemented as instructions stored on a computer-readable storage device or storage medium, which may be read and executed by at least one processor to perform the operations described herein. A computer-readable storage device or storage medium may include any non-transitory mechanism for storing information in a form readable by a machine (e.g., a computer). For example, a computer-readable storage device or storage medium may include read-only memory (ROM), random-access memory (RAM), magnetic disk storage media, optical storage media, flash-memory devices, and other storage devices and media. In some embodiments, the electronic devices and computing systems described herein may include one or more processors and may be configured with instructions stored on a computer-readable storage device.

Examples, as described herein, may include, or may operate on, logic or a number of components, modules, or mechanisms. Modules are tangible entities (e.g., hardware) capable of performing specified operations and may be configured or arranged in a certain manner. In an example, circuits may be arranged (e.g., internally or with respect to external entities such as other circuits) in a specified manner as a module. In an example, the whole or part of one or more computer systems (e.g., a standalone, client or server computer system) or one or more hardware processors may be configured by firmware or software (e.g., instructions, an application portion, or an application) as a module that operates to perform specified operations. In an example, the software may reside on a machine readable medium. In an example, the software, when executed by the underlying hardware of the module, causes the hardware to perform the specified operations.

Accordingly, the term "module" is understood to encompass a tangible entity, be that an entity that is physically constructed, specifically configured (e.g., hardwired), or temporarily (e.g., transitorily) configured (e.g., programmed) to operate in a specified manner or to perform part or all of any operation described herein. Considering examples in which modules are temporarily configured, each of the modules need not be instantiated at any one moment in time. For example, where the modules comprise a general-purpose hardware processor configured using software, the general-purpose hardware processor may be configured as respective different modules at different times. Software may accordingly configure a hardware processor, for example, to constitute a particular module at one instance of time and to constitute a different module at a different instance of time.

Additional examples of the presently described method, system, and device embodiments include the following, non-limiting configurations. Each of the following non-limiting examples can stand on its own, or can be combined in any permutation or combination with any one or more of the other examples provided below, in the claims, or elsewhere in the present disclosure.

A first example can include the subject matter (such as an apparatus, a method, a means for performing acts, or a machine readable medium including instructions that, when performed by the machine, that can cause the machine to perform acts), for integrating guided coaching using an information system, including: accessing member profile information for a member user, the member profile information retrieved from a member profile database, and the member profile information being relevant to accomplishment of a goal set by the member user; obtaining suggested content for delivery to the member user based on the member profile information, the suggested content retrieved from a content database; receiving changes to the suggested content from a coaching user; and electronically delivering the suggested content to the member user, the delivering incorporating the changes to the suggested content received from the coaching user.

A second example can include, or can optionally be combined with the subject matter of the first example, to include subject matter (such as an apparatus, a method, a means for performing acts, or a machine readable medium including instructions that, when performed by the machine, that can cause the machine to perform acts), for an information system, including: a user information database storing information for a client user; a coaching database storing information for a coaching user; and a coaching module implemented using a processor, the coaching module configured to generate content for the client user that is received from the coaching user, and deliver the content to the client user, the content and a timing of delivery of the content customized to the user based on the information stored for the client user, wherein the content relates to an action to achieve a goal defined by the user.

A third example can include, or can optionally be combined with the subject matter of one or any combination of the first and second example, to include subject matter (such as an apparatus, a method, a means for performing acts, or a machine readable medium including instructions that, when performed by the machine, that can cause the machine to perform acts), for an computing device, configured to: gen-

erate a coaching content service interface for display within a coaching graphical user interface accessible by a coaching user, the coaching graphical user interface arranged to: display profile information for a client user; implement changes to coaching content selected for the client user; and receive a timing designation of coaching content for delivery to the client user; generate a client content service interface for display within a client graphical user interface accessible by the client user, the client graphical user interface arranged to: present the coaching content to the client user at the designated timing.

The following claims are hereby incorporated into the detailed description, with each claim and identified combination of claims standing on its own as a separate example.

What is claimed is:

1. A method for integrating guided coaching with content of an information system, comprising:

accessing member profile information for a member user, the member profile information retrieved from a member profile database, and the member profile information being relevant to accomplishment of a goal that is set by the member user, wherein the goal is accomplished in connection with performance of a plurality of real-world activities by the member user;

obtaining suggested content for delivery to the member user based on the member profile information, the suggested content retrieved from a content database of an information system, the suggested content including information to assist a performance of a particular activity of the plurality of real-world activities by the member user, wherein the suggested content is retrieved for the member user based on characteristics of the member user that are indicated in the member profile information;

designating the suggested content for delivery to the member user at a specified delivery timing, the specified delivery timing of the deliver to the member user based on the characteristics of the member user that are indicated in the member profile information and a determined likelihood of the performance of the particular activity by the member user;

receiving changes to the suggested content from a coaching user, the changes to the suggested content received from an electronic device of the coaching user, wherein the changes to the suggested content retrieved for the member user by the information system include changes to the information of the suggested content or changes to the specified delivery timing, to encourage the performance of the particular activity by the member user; and

electronically delivering the coach-changed suggested content to an electronic device of the member user at the specified delivery timing, the delivering incorporating the changes to the information of suggested content or the changes to the specified delivery timing received from the coaching user.

2. The method of claim **1**, wherein receiving changes to the suggested content from the coaching user includes receiving additional content generated from the coaching user to include in the changes to the information of the suggested content.

3. The method of claim **1**, wherein the suggested content includes multiple instances of information for delivery, the method further comprising:

determining respective delivery times for delivery of the multiple instances of information of the suggested content to the member user, the respective delivery times including the specified delivery timing, the respective delivery times being determined by the information system based on the member profile information.

4. The method of claim **3**, further comprising:

creating a playlist of the suggested content, the playlist of the suggested content configured to deliver respective items of the information for delivery at the determined respective delivery times.

5. The method of claim **1**, further comprising:

receiving feedback from the member user in response to the coach-changed suggested content; and

providing the feedback from the member user to the coaching user.

6. The method of claim **1**, further comprising:

associating the member user with the coaching user based on a subscription purchased by the member user, the subscription providing access to content from the coaching user.

7. The method of claim **1**, wherein the member profile information includes archived data and current data relating to at least one of: demographic information, goal information, supporter information, activity information, restriction information, preference information, personality information, physiological information, communication preference information, timing information, environment information, or tracking information.

8. The method of claim **7**, wherein obtaining suggested content for delivery to the member user based on the member profile information includes selecting suggested content for the member user based on real-time information of member user activity maintained in the member profile information, the real-time information originating from an electronic device of the member user.

9. The method of claim **8**, wherein the real-time information of member user activity is provided to the coaching user, with the method further comprising:

receiving input from the coaching user, the input based on the real-time information and configured to change the suggested content to be consistent with the real-time information.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE

CERTIFICATE OF CORRECTION

PATENT NO.	: 9,110,958 B2
APPLICATION NO.	: 13/801048
DATED	: August 18, 2015
INVENTOR(S)	: Brust et al.

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In the claims

In column 35, line 37, in Claim 1, delete “deliver” and insert --delivery--, therefor

Signed and Sealed this
Fifth Day of January, 2016

Michelle K. Lee

Michelle K. Lee
Director of the United States Patent and Trademark Office